



## Full wwPDB EM Validation Report ⓘ

Jun 3, 2023 – 02:14 pm BST

PDB ID : 8BHV  
EMDB ID : EMD-16070  
Title : DNA-PK XLF mediated dimer bound to PAXX  
Authors : Hardwick, S.W.; Chaplin, A.K.  
Deposited on : 2022-11-01  
Resolution : 4.51 Å (reported)

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

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev50  
MolProbity : 4.02b-467  
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) : 2.33

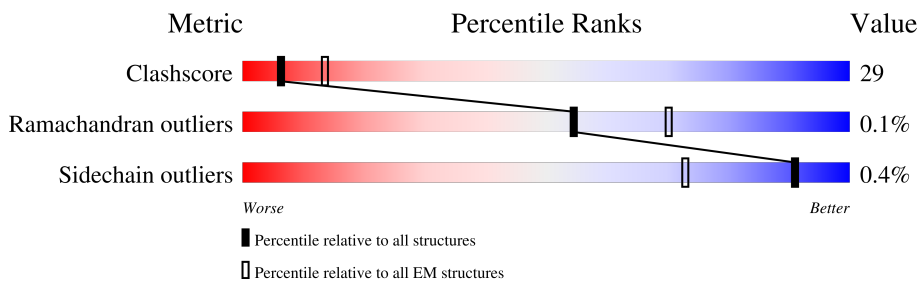
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 4.51 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  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$ . The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion  $< 40\%$ ). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	4128	
1	F	4128	
2	K	336	
2	L	336	
2	N	336	
2	O	336	
3	M	911	
3	P	911	

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Mol	Chain	Length	Quality of chain
4	Q	299	 11% 30% 42% 27%
4	R	299	 12% 28% 46% 25%
5	a	609	 83% 17%
5	h	609	 83% 17%
6	b	732	 5% 89% 11%
6	j	732	 87% 13%
7	c	204	 11% 89%
7	i	204	 11% 89%
8	D	27	 19% 67% 15%
9	E	28	 100%
10	I	24	 8% 92%
11	J	24	 25% 71%

## 2 Entry composition [i](#)

There are 11 unique types of molecules in this entry. The entry contains 91357 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 DNA-dependent protein kinase catalytic subunit.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	3549	Total	C	N	O	S	0	0
			28250	18146	4783	5134	187		
1	F	3543	Total	C	N	O	S	0	0
			28263	18162	4780	5132	189		

- Molecule 2 is a protein called DNA repair protein XRCC4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	K	201	Total	C	N	O	S	0	0
			1628	1031	278	312	7		
2	L	195	Total	C	N	O	S	0	0
			1589	1009	271	302	7		
2	N	201	Total	C	N	O	S	0	0
			1625	1030	278	310	7		
2	O	194	Total	C	N	O	S	0	0
			1589	1009	271	302	7		

- Molecule 3 is a protein called DNA ligase 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	M	258	Total	C	N	O	S	0	0
			2085	1327	349	396	13		
3	P	246	Total	C	N	O	S	0	0
			1983	1261	339	371	12		

- Molecule 4 is a protein called Non-homologous end-joining factor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	Q	218	Total	C	N	O	S	0	0
			1745	1119	294	319	13		
4	R	225	Total	C	N	O	S	0	0
			1796	1150	301	330	15		

- Molecule 5 is a protein called X-ray repair cross-complementing protein 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	a	505	Total	C	N	O	S	0	0
			4038	2583	691	747	17		
5	h	505	Total	C	N	O	S	0	0
			4026	2578	681	750	17		

- Molecule 6 is a protein called X-ray repair cross-complementing protein 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	b	650	Total	C	N	O	S	0	0
			5214	3328	876	985	25		
6	j	636	Total	C	N	O	S	0	0
			5082	3252	854	951	25		

- Molecule 7 is a protein called Protein PAXX.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	c	23	Total	C	N	O	S	0	0
			165	105	27	32	1		
7	i	23	Total	C	N	O	S	0	0
			162	102	27	32	1		

- Molecule 8 is a DNA chain called DNA (26-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
8	D	27	Total	C	N	O	P	0	0
			556	268	95	166	27		

- Molecule 9 is a DNA chain called DNA (27-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
9	E	28	Total	C	N	O	P	0	0
			576	277	107	164	28		

- Molecule 10 is a DNA chain called DNA (28-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
10	I	24	Total	C	N	O	P	0	0
			494	238	92	140	24		

- Molecule 11 is a DNA chain called DNA (24-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
11	J	24	491	239	79	149	24	0	0









G4083	H4013	G3939	L3775	I3701	F3632	I3472	CYS	K2360	E3195	H3122	L3061
D4086	K4014	L3940	D3778	P3702	I3633	T3479	GLY	E3261	K3196	Q3123	Q3054
H4087	M4015	H3944	G3778	G3707	Q3694	T3480	PRO	H3262	L3197	S3124	R3054
M4088	GLU	G3708	S3782	R3708	T3695	L3480	ALA	H3263	THR	R3125	P3058
R4090	GLN	G3781	C3782	G3709	K3638	S3481	G3407	K3264	LEU	L3126	Q3058
A4091	LYS	R3782	E3639	R3710	E3639	K3483	G3408	S3266	PRO	T3127	R3060
Q4092	MET	P3711	K3642	P3711	K3642	V3490	V3409	K3267	GLU	K3128	S3060
E4095	L3786	E3714	H3643	E3714	H3643	P3491	L3416	L3268	ASP	S3131	L3061
E4100	L3787	F3722	G3646	F3722	G3646	C3492	F3419	R3269	ASN	A3134	T3063
E4101	L3788	F3723	K3647	F3723	K3647	C3493	L3438	R3270	SER	F3074	R3063
Q4102	L3789	H3716	GLY	H3716	GLY	Q3494	C3421	D3271	MET	L3135	L3065
V4104	L3790	R3718	LYS	R3718	LYS	F3495	Q3422	W3272	ASN	T3136	Q3066
C4106	L3791	I3719	LEU	I3719	LEU	S3497	Q3423	W3276	VAL	E3137	K3067
L4108	L3792	F3720	ARG	F3720	ARG	S3500	K3425	R3282	ASP	I3138	E3072
L4109	L3793	M3725	MET	M3725	MET	H3501	K3426	L3283	PRO	I3142	L3073
L4110	L3794	V3728	LYS	V3728	LYS	K3502	E3429	L3287	SER	I3145	L3077
L4111	L3795	R3729	LEU	R3729	LEU	M3503	F3419	R3287	ALA	Q3148	L3077
L4112	L3796	F3729	LEU	F3729	LEU	V3503	S3444	R3288	ALA	G3149	L3078
L4113	L3797	S3730	LEU	S3730	LEU	A3504	SER	R3289	ARG	N3150	E3079
L4114	L3798	A3731	GLN	A3731	GLN	L3505	VAL	R3289	MET	L3151	L3080
L4115	L3799	F3732	ASP	F3732	ASP	D3509	ASP	S3290	GLU	S3152	H3081
L4116	L3800	M3733	LYS	M3733	LYS	Q3510	E3429	G3292	GLN	P3156	Y3082
L4117	L3801	R3734	ALA	R3734	ALA	A3511	SER	C3292	GLU	L3157	S3083
L4118	L3802	K3735	GLU	K3735	GLU	V3512	ALA	C3293	GLU	L3157	Q3084
L4119	L3803	S3736	LEU	S3736	LEU	A3513	SER	S3294	GLN	K3158	E3085
L4120	L3804	A3737	LEU	A3737	LEU	V3514	SER	E3295	GLU	R3159	E3086
L4121	L3805	R3737	GLN	R3737	GLN	Q3515	GLN	Q3296	GLU	L3160	S3087
L4122	L3806	I3738	ASP	I3738	ASP	Q3515	ASP	F3297	GLU	L3161	L3088
L4123	L3807	L3814	LYS	L3814	LYS	R3516	ASP	D3226	GLN	M3162	L3088
L4124	L3808	L3815	THR	L3815	THR	H3516	THR	L3227	GLN	Y3168	D3097
L4125	L3809	L3816	PRO	L3816	PRO	Q3517	PRO	L3227	GLN	P3169	D3097
L4126	L3810	M3820	LYS	M3820	LYS	R3517	LYS	F3236	GLU	D3170	R3098
L4127	L3811	L3817	LYS	L3817	LYS	S3517	LYS	S3237	GLU	A3171	R3098
L4128	L3812	L3818	THR	L3818	THR	V3518	THR	M3238	GLU	K3172	Y3101
L4129	L3813	L3819	LYS	L3819	LYS	L3521	LYS	K3239	GLU	M3173	Y3101
L4130	L3814	L3820	ASP	L3820	ASP	Y3525	ASP	M3240	GLU	I3178	I3103
L4131	L3815	L3821	THR	L3821	THR	Y3525	THR	K3241	GLU	Q3108	Q3108
L4132	L3816	L3822	PRO	L3822	PRO	V3525	PRO	M3242	GLU	W3179	S3109
L4133	L3817	L3823	LYS	L3823	LYS	V3530	LYS	I3243	GLU	D3180	S3109
L4134	L3818	L3824	LYS	L3824	LYS	V3530	LYS	I3243	GLU	F3110	F3110
L4135	L3819	L3825	LYS	L3825	LYS	S3536	LYS	I3243	GLU	I3182	Q3111
L4136	L3820	L3826	LYS	L3826	LYS	S3536	LYS	I3243	GLU	I3183	Q3112
L4137	L3821	L3827	LYS	L3827	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4138	L3822	L3828	LYS	L3828	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4139	L3823	L3829	LYS	L3829	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4140	L3824	L3830	LYS	L3830	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4141	L3825	L3831	LYS	L3831	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4142	L3826	L3832	LYS	L3832	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4143	L3827	L3833	LYS	L3833	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4144	L3828	L3834	LYS	L3834	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4145	L3829	L3835	LYS	L3835	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4146	L3830	L3836	LYS	L3836	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4147	L3831	L3837	LYS	L3837	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4148	L3832	L3838	LYS	L3838	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4149	L3833	L3839	LYS	L3839	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4150	L3834	L3840	LYS	L3840	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4151	L3835	L3841	LYS	L3841	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4152	L3836	L3842	LYS	L3842	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4153	L3837	L3843	LYS	L3843	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4154	L3838	L3844	LYS	L3844	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4155	L3839	L3845	LYS	L3845	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4156	L3840	L3846	LYS	L3846	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4157	L3841	L3847	LYS	L3847	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4158	L3842	L3848	LYS	L3848	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4159	L3843	L3849	LYS	L3849	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4160	L3844	L3850	LYS	L3850	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4161	L3845	L3851	LYS	L3851	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4162	L3846	L3852	LYS	L3852	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4163	L3847	L3853	LYS	L3853	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4164	L3848	L3854	LYS	L3854	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4165	L3849	L3855	LYS	L3855	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4166	L3850	L3856	LYS	L3856	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4167	L3851	L3857	LYS	L3857	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4168	L3852	L3858	LYS	L3858	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4169	L3853	L3859	LYS	L3859	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4170	L3854	L3860	LYS	L3860	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4171	L3855	L3861	LYS	L3861	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4172	L3856	L3862	LYS	L3862	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4173	L3857	L3863	LYS	L3863	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4174	L3858	L3864	LYS	L3864	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4175	L3859	L3865	LYS	L3865	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4176	L3860	L3866	LYS	L3866	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4177	L3861	L3867	LYS	L3867	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4178	L3862	L3868	LYS	L3868	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4179	L3863	L3869	LYS	L3869	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4180	L3864	L3870	LYS	L3870	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4181	L3865	L3871	LYS	L3871	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4182	L3866	L3872	LYS	L3872	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4183	L3867	L3873	LYS	L3873	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4184	L3868	L3874	LYS	L3874	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4185	L3869	L3875	LYS	L3875	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4186	L3870	L3876	LYS	L3876	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4187	L3871	L3877	LYS	L3877	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4188	L3872	L3878	LYS	L3878	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4189	L3873	L3879	LYS	L3879	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4190	L3874	L3880	LYS	L3880	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4191	L3875	L3881	LYS	L3881	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4192	L3876	L3882	LYS	L3882	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4193	L3877	L3883	LYS	L3883	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4194	L3878	L3884	LYS	L3884	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4195	L3879	L3885	LYS	L3885	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4196	L3880	L3886	LYS	L3886	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4197	L3881	L3887	LYS	L3887	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4198	L3882	L3888	LYS	L3888	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4199	L3883	L3889	LYS	L3889	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4200	L3884	L3890	LYS	L3890	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4201	L3885	L3891	LYS	L3891	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4202	L3886	L3892	LYS	L3892	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4203	L3887	L3893	LYS	L3893	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4204	L3888	L3894	LYS	L3894	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4205	L3889	L3895	LYS	L3895	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4206	L3890	L3896	LYS	L3896	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4207	L3891	L3897	LYS	L3897	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4208	L3892	L3898	LYS	L3898	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4209	L3893	L3899	LYS	L3899	LYS	S3536	LYS	I3243	GLU	R3186	N3113
L4210	L3894	L3900	LYS	L3900	LYS	S3536	LYS	I3243	GLU	R3186	N3113

● Molecule 1: DNA-dependent protein kinase catalytic subunit

Chain F:  41% 45% 14%

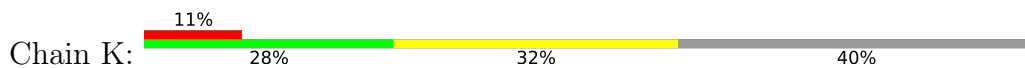
MET	F78	L162	E239	L320	F396	P473	GLU	A622	GLU	I778	L848	E916	P886
ALA	R79	L163	E240	L323	L397	V474	ALA	F623	ALA	I779	E849	L917	L987
GLY	R79	K164	D241	V323	L397	L475	PHE	I624	GLY	Y779	E850	A918	L988
SER	R82	K164	P242	S324	Q399	L479	SER	N625	SER	I780	E851	L919	V988
GLY	R85	K165	Q243	R325	THR	I479	VAL	V626	VAL	M785	R852	T920	Q990
ALA	L86	I166	T244	N326	ASP	V482	ASN	V627	ASN	Y788	V856	D923	L991
GLY	L86	P167	S245	M330	THR	V483	SER	E628	SER	Y789	Y857	E924	V994
VAL	K87	D168	R246	A331	GLY	H484	SER	R631	SER	Y789	I859	Q925	F995
ARG	F88	T169	F249	A331	ASP	H485	SER	R631	SER	Y790	I860	Q926	T996
C10	L89	V170	F249	A331	ASP	H486	SER	R631	SER	K790	G863	K927	T997
L13	E94	L171	V252	M333	D405	G486	GLU	L634	GLU	I791	G864	V928	N997
Q16	Q98	E172	L252	H334	R406	L487	S559	P635	S559	I792	G865	C931	N998
E17	Q98	K173	L253	K335	V407	I488	S560	E636	S560	L793	Q866	C932	K999
T18	Q98	V174	L253	N336	Q409	R489	L564	K637	L564	P794	I866	E932	K1000
T18	A101	Y175	ALA	K337	M410	I490	L564	Q638	L564	K801	K667	E933	V1007
A22	A101	E176	ILE	F340	P411	S492	S571	A639	S571	T802	K668	L933	I1013
D23	Y103	E177	ARG	V340	S412	S492	S571	A639	S571	S803	N869	L934	I1014
R24	S104	G179	Q259	F341	L414	P498	K574	F642	K574	ALA	L870	M837	D1015
A30	V105	E183	Y265	Q344	Q415	LYS	D580	F643	D580	LEU	THR	M837	V938
G31	I107	V184	Y265	F345	S416	GLY	L581	P644	L581	SER	VAL	VAL	G1016
H32	K108	V184	P268	F345	V417	PRO	T582	W645	T582	ASP	THR	THR	G1017
Q33	N109	E188	P268	L348	A418	GLU	L583	V646	L583	GLU	SER	SER	M941
L34	T110	M189	G271	L349	S419	SER	L584	F649	L584	THR	THR	ASP	D1018
L34	C111	M189	L272	ARG	V420	GLU	L585	S650	L585	LYS	ASP	GLU	D1019
R36	V114	N192	L272	ASN	V420	SER	Q596	Y651	Q596	ASN	GLU	GLU	D1022
R36	V114	N192	L273	VAL	T432	GLU	THR	E652	E652	ASN	M879	R948	S1023
Q40	K117	M195	L274	ASP	P433	ASP	THR	E653	E653	TRP	M880	P949	T1024
E41	D118	M195	F275	SER	P433	HIS	VAL	I654	I654	GLU	K881	GLU	L1025
C42	R119	M195	A276	ASN	E436	ARG	GLY	L655	L655	VAL	VAL	GLY	R1026
V43	R119	F197	L277	N356	E436	ALA	GLU	Q656	Q656	SER	V834	GLY	C1029
L44	K122	R198	L277	K357	V439	SER	GLU	S657	S657	ALA	ALA	ALA	L1037
S46	K124	R198	L277	E358	V440	GLY	GLU	T658	T658	LEU	LEU	GLY	K1038
L51	I125	F200	L286	L359	I443	GLU	GLU	R659	R659	SER	SER	ALA	W1039
A52	L130	F200	L286	L359	I443	GLU	GLU	R659	R659	ARG	ARG	ALA	L1040
L53	L131	F200	L287	L361	I443	VAL	GLY	S664	S664	ALA	ALA	ALA	I1041
Q54	L132	E203	L287	I361	I443	VAL	GLY	G665	G665	ALA	ALA	GLN	L1042
L57	K133	E203	L288	I361	I443	THR	THR	K668	K668	ALA	ALA	GLN	Q1043
V58	L134	E203	D288	I361	I443	GLY	GLU	L669	L669	GLY	GLY	GLY	T1044
F59	L135	E203	N289	I363	I443	LYS	PRO	L670	L670	LYS	LYS	LYS	L1045
S60	Q136	E203	N289	R364	I443	LYS	PRO	L671	L671	GLY	GLY	GLY	L1046
D62	T137	E203	N289	R364	I443	LYS	PRO	L672	L672	GLY	GLY	GLY	Q1047
L65	R142	E203	N289	R364	I443	LYS	PRO	L673	L673	GLY	GLY	GLY	Q1048
L66	R142	E203	N289	R364	I443	LYS	PRO	L674	L674	GLY	GLY	GLY	L1049
V67	D145	E203	N289	R364	I443	LYS	PRO	L675	L675	GLY	GLY	GLY	E1050
F68	K148	E203	N289	R364	I443	LYS	PRO	L676	L676	GLY	GLY	GLY	K1051
V69	K148	E203	N289	R364	I443	LYS	PRO	L677	L677	GLY	GLY	GLY	L1052
R70	F153	E203	N289	R364	I443	LYS	PRO	L678	L678	GLY	GLY	GLY	P1053
K71	F153	E203	N289	R364	I443	LYS	PRO	L679	L679	GLY	GLY	GLY	Q1054
S72	F156	E203	N289	R364	I443	LYS	PRO	L680	L680	GLY	GLY	GLY	N1055
I76	E159	E203	N289	R364	I443	LYS	PRO	L681	L681	GLY	GLY	GLY	L1056
E77	E159	E203	N289	R364	I443	LYS	PRO	L682	L682	GLY	GLY	GLY	K1057
		E203	N289	R364	I443	LYS	PRO	L683	L683	GLY	GLY	GLY	L1058
		E203	N289	R364	I443	LYS	PRO	L684	L684	GLY	GLY	GLY	L1059
		E203	N289	R364	I443	LYS	PRO	L685	L685	GLY	GLY	GLY	F1060

GLU	L1939	L1872	P1730	K1651	L1572	CYS	K1422	L1356	L1282	L1212	L1145	K1061
ILE	Y1940	Y1873	T1733	I1652	K1573	LEU	I1423	W1356	L1282	K1213	M1146	R1062
ARG	F1805	Y1874	T1733	L1653	D1576	PRO	T1424	L1357	S1289	K1214	K1147	K1063
LYS	K1875	K1875	F1736	F1661	V1579	SER	A1425	L1358	S1289	E1215	A1148	Y1064
ALA	C1947	I1876	M1737	M1662	V1579	D1504	Q1426	L1359	K1292	F1219	K1149	A1067
ARG	I1948	D1878	M1738	T1663	L1580	L1505	S1427	K1360	A1293	F1219	K1150	
ARG	I1949	V1879	Y1739	S1664	E1581	S1506	I1428	K1361	V1294	L1220	R1151	
GLU	S1960	M1880	V1740	H1665	L1582	C1507	I1431	D1362	A1296	T1223	P1154	P1070
ALA	I1951	M1881	V1740	G1666	Q1509	L1508	D1440	H1367	F1296	F1224	R1155	N1071
ASN	C1953	S1882	M1743	S1666	L1510	L1509	A1441	M1368	F1297	F1224	A1072	A1072
GLY	F1956	R1883	K1744	G1667	L1511	L1508	Q1442	M1369	E1299	Q1231	F1073	F1073
SER	F1956	P1885	F1746	E1670	S1512	L1511	V1443	R1370	S1300	S1233	R1074	R1074
ASP	K1960	LYS	L1747	T1674	G1513	D1444	D1444	L1372	H1304	I1234	L1163	G1077
GLY	F1961	ASP	L1747	Y1675	G1513	L1444	D1444	L1372	D1306	G1234	C1164	
PRO	Y1962	ASP	L1748	Y1675	L1514	L1514	R1445	V1373	I1306	I1236	L1165	F1081
SER	Q1963	ASP	A1749	L1678	L1515	L1515	S1446	Q1374	I1306	L1236	L1166	F1081
THR	GLY	VAL	L1750	L1678	V1593	L1516	R1447	L1375	I1307	A1237	L1167	A1082
THR	GLY	HIS	E1751	L1679	S1594	L1517	L1448	L1376	A1308	D1238	D1167	N1083
ALA	PHE	ALA	L1752	L1683	A1595	A1518	L1448	C1377	A1309	P1239	L1168	N1084
LEU	L1815	LEU	S1753	K1683	V1596	A1518	V1452	E1378	E1310	T1240	V1169	I1085
LEU	R1816	LEU	L1753	L1684	L1597	F1521	S1453	E1378	K1311	LEU	K1170	Y1086
ASP	Q1817	ASP	L1747	L1684	L1597	F1521	A1454	P1379	K1311	LEU	W1171	R1087
ASP	S1818	ASP	L1748	D1685	L1597	F1521	A1454	A1380	C1312	LEU	L1172	
PRO	F1819	ASP	A1749	L1686	M1600	R1527	C1455	A1381	F1313	TVR	L1173	
VAL	V1820	VAL	L1750	L1687	L1601	L1528	K1456	I1381	GLY	LEU		R1090
HIS	D1821	HIS	E1751	H1687	L1601	L1528	K1456	I1381	THR	ARG		E1091
ALA	R1822	ALA	L1752	L1688	D1602	V1529	Q1457	G1383	GLY	ARG		E1092
LEU	S1823	LEU	S1753	K1689	Q1603	S1530	H1458	F1384	GLY	GLY		E1093
LEU	L1824	LEU	L1754	Q1691	S1604	L1531	H1458	A1380	ALA	PHE		S1094
VAL	D1828	VAL	M1762	Q1691	F1605	M1534	R1460	A1380	ALA	PHE		L1095
GLY	W1829	GLY	L1766	V1693	F1605	M1534	R1460	A1461	ASN	S1249		V1096
ASN	H1830	ASN	L1758	T1694	R1608	M1534	A1461	A1461	ASN	Q1251		E1097
PRO	L1834	PRO	M1762	T1694	R1608	M1534	A1461	A1461	ARG	Q1251		Q1098
ALA	A1835	ALA	L1766	F1697	M1610	L1538	H1465	H1465	T1322	L1254		Q1098
VAL	L1836	VAL	L1766	F1698	Q1611	S1539	M1466	M1466	S1323	C1255		R1184
LEU	H1837	LEU	Q1770	F1698	Q1611	T1540	L1475	L1467	P1324	L1254		F1099
LEU	E1838	LEU	Q1771	F1698	Q1611	ALA	L1475	L1467	P1324	C1255		V1100
LEU	L1843	LEU	Q1772	F1698	Q1611	ALA	L1475	L1467	P1324	C1255		F1101
GLY	D1846	GLY	V1773	F1699	Q1614	SER	Q1471	Q1471	E1326	L1257		L1104
ASP	D1849	ASP	M1774	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PRO	V1850	PRO	M1774	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ARG	L1851	ARG	E1775	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ALA	K1852	ALA	E1776	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ARG	K1852	ARG	E1776	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
THR	SER	THR	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
GLY	SER	GLY	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
GLY	SER	GLY	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
THR	SER	THR	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
GLY	SER	GLY	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ARG	SER	ARG	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PHE	SER	PHE	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PRO	SER	PRO	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
VAL	SER	VAL	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ALA	SER	ALA	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
THR	SER	THR	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
GLY	SER	GLY	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ARG	SER	ARG	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PHE	SER	PHE	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PRO	SER	PRO	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
VAL	SER	VAL	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ALA	SER	ALA	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
THR	SER	THR	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
GLY	SER	GLY	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ARG	SER	ARG	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PHE	SER	PHE	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PRO	SER	PRO	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
VAL	SER	VAL	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ALA	SER	ALA	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
THR	SER	THR	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
GLY	SER	GLY	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ARG	SER	ARG	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PHE	SER	PHE	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PRO	SER	PRO	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
VAL	SER	VAL	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ALA	SER	ALA	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
THR	SER	THR	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
GLY	SER	GLY	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ARG	SER	ARG	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PHE	SER	PHE	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PRO	SER	PRO	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
VAL	SER	VAL	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ALA	SER	ALA	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
THR	SER	THR	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
GLY	SER	GLY	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ARG	SER	ARG	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PHE	SER	PHE	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PRO	SER	PRO	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
VAL	SER	VAL	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ALA	SER	ALA	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
THR	SER	THR	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
GLY	SER	GLY	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ARG	SER	ARG	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PHE	SER	PHE	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PRO	SER	PRO	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
VAL	SER	VAL	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ALA	SER	ALA	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
THR	SER	THR	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
GLY	SER	GLY	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ARG	SER	ARG	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PHE	SER	PHE	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PRO	SER	PRO	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
VAL	SER	VAL	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ALA	SER	ALA	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
THR	SER	THR	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
GLY	SER	GLY	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ARG	SER	ARG	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PHE	SER	PHE	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
PRO	SER	PRO	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
VAL	SER	VAL	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104
ALA	SER	ALA	E1777	F1699	Q1614	LEU	Q1471	Q1471	E1326	L1257		L1104

L3197	THR	F2167	H2333	F2800	D2376	E2450	S2526	PHE	PRO	L2726	Q2807	E2895	A2969	S3047	H3122
L3200	PRO	R2158	N2234	Q2301	R2377	E2451	H2527	VAL	LEU	R2727	L2808	A2896	A2896	K3048	Q3123
L3201	LEU	R2169	E2236	V2304	R2377	R2452	T2529	GLU	VAL	R2728	F2809	L2897	L2897	L3049	S3124
L3202	GLN	Y2160	E2236	V2304	R2377	R2452	T2529	THR	ASP	R2729	S2810	L2901	Y2972	K3050	R3125
L3203	GLN	A2161	E2237	N2306	M2379	L2455	L2531	ALA	THR	R2730	S2811	L2901	D2973	L3051	R3126
L3204	ASP	K2162	I2238	N2307	A2381	L2455	L2532	SER	SER	R2731	L2812	ALA	E2974	L3052	P3127
L3205	ASN	H2163	L2241	M2307	A2381	V2468	S2533	GLN	PRO	R2732	F2813	GLU	ALA	L3053	K3128
L3206	SER	W2164	L2241	F2309	F2382	V2468	S2534	GLY	SER	E2737	L2817	LEU	GLU	Q3054	L3129
L3207	SER	L2165	V2242	S2308	F2382	F2461	N2534	GLY	SER	K2738	L2817	GLU	LEU	D3058	L3130
L3208	MET	S2166	E2243	F2309	F2382	F2461	N2534	THR	SER	L2739	E2819	ALA	ALA	Q3059	S3131
L3209	ASN	P2167	C2244	R2311	L2386	F2461	L2536	LEU	ASP	K2739	E2819	ALA	ALA	S3060	S3132
L3210	VAL	L2168	C2244	Y2312	L2386	F2461	L2536	GLN	ASP	L2740	M2820	LYS	LYS	L3061	L3133
L3211	ASP	L2169	K2246	K2313	F2389	H2464	R2538	THR	LEU	S2740	M2820	ARG	ARG	L3061	L3134
L3212	ASP	Q2170	D2247	E2314	H2390	S2466	L2539	ARG	LEU	K2746	K2824	VAL	VAL	L3061	L3135
L3213	GLN	L2171	C2248	E2314	H2390	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3136
L3214	ASP	A2172	C2248	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3137
L3215	GLN	I2176	S2250	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3138
L3216	ASP	I2251	I2251	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3139
L3217	GLY	P2252	S2250	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3140
L3218	GLY	P2253	S2250	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3141
L3219	GLY	R2254	I2255	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3142
L3220	GLY	G2181	I2256	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3143
L3221	GLY	I2182	I2256	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3144
L3222	GLY	I2183	E2258	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3145
L3223	GLY	Y2184	K2259	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3146
L3224	GLY	M2185	F2260	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3147
L3225	GLY	V2186	K2263	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3148
L3226	GLY	V2187	K2263	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3149
L3227	GLY	E2188	D2264	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3150
L3228	GLY	I2189	P2265	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3151
L3229	GLY	I2192	K2268	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3152
L3230	GLY	L2193	D2269	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3153
L3231	GLY	L2194	N2270	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3154
L3232	GLY	S2195	S2271	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3155
L3233	GLY	W2196	S2272	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3156
L3234	GLY	G2273	G2273	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3157
L3235	GLY	L2199	K2268	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3158
L3236	GLY	L2200	D2269	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3159
L3237	GLY	A2200	N2274	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3160
L3238	GLY	T2201	L2274	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3161
L3239	GLY	L2276	L2276	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3162
L3240	GLY	P2202	L2277	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3163
L3241	GLY	R2214	L2278	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3164
L3242	GLY	F2218	V2280	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3165
L3243	GLY	L2219	N2283	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3166
L3244	GLY	N2220	D2284	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3167
L3245	GLY	K2221	K2221	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3168
L3246	GLY	H2222	Y2288	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3169
L3247	GLY	V2223	Y2288	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3170
L3248	GLY	Q2291	Q2291	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3171
L3249	GLY	C2292	C2292	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3172
L3250	GLY	H2225	H2225	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3173
L3251	GLY	K2227	I2294	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3174
L3252	GLY	R2228	K2228	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3175
L3253	GLY	A2229	S2296	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3176
L3254	GLY	V2230	S2297	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3177
L3255	GLY	F2231	F2231	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3178
L3256	GLY	R2232	R2232	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3179
L3257	GLY	K2233	K2233	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3180
L3258	GLY	E2234	E2234	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3181
L3259	GLY	F2235	F2235	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3182
L3260	GLY	R2236	R2236	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3183
L3261	GLY	K2237	K2237	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3184
L3262	GLY	A2238	A2238	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3185
L3263	GLY	R2239	R2239	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3186
L3264	GLY	E2240	E2240	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3187
L3265	GLY	F2241	F2241	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3188
L3266	GLY	R2242	R2242	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3189
L3267	GLY	K2243	K2243	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3190
L3268	GLY	E2244	E2244	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3191
L3269	GLY	F2245	F2245	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3192
L3270	GLY	R2246	R2246	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3193
L3271	GLY	K2247	K2247	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3194
L3272	GLY	E2248	E2248	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3195
L3273	GLY	F2249	F2249	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3196
L3274	GLY	R2250	R2250	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3197
L3275	GLY	K2251	K2251	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3198
L3276	GLY	E2252	E2252	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3199
L3277	GLY	F2253	F2253	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3200
L3278	GLY	R2254	R2254	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3201
L3279	GLY	K2255	K2255	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3202
L3280	GLY	E2256	E2256	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3203
L3281	GLY	F2257	F2257	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3204
L3282	GLY	R2258	R2258	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3205
L3283	GLY	K2259	K2259	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3206
L3284	GLY	E2260	E2260	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3207
L3285	GLY	F2261	F2261	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3208
L3286	GLY	R2262	R2262	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3209
L3287	GLY	K2263	K2263	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3210
L3288	GLY	E2264	E2264	V2315	G2391	T2467	L2542	THR	PHE	K2746	K2824	VAL	VAL	L3061	L3211
L3289	GLY	F2265													

L3262	G3364	I1E	I3499	Q3577	I3662	V3728	R3799	K3873	L3970	LYS	P4114
S3286	SER	ASP	M3502	N3550	T3663	R3729	R3799	R3874	M3971	ASN	M4115
R3269	SER	ALA	P3503	P3581	N3664	A3730	G3801	K3877	L3972	W4038	M4116
R3272	SER	GLU	A3504	E3582	M3665	R3733	L3903	P3878	P3973	P4039	L4117
L3273	D3369	GLN	L3506	L3583	L3666	R3734	E3804	A3880	K3975	R4041	G4118
W3276	V3373	K3441	D3507	F3585	L3668	R3736	W3905	D3861	E3976	Q4042	R4119
Q3278	L3377	Y3442	K3508	K3586	K3669	R3737	V3910	L3882	G3977	K4043	T4120
C3281	L3377	P3443	D3509	K3586	M3670	R3738	R3911	F3885	G3978	I4044	W4124
R3282	V3277	A3444	Q3510	N3550	K3671	I3738	V3810	R3885	M3980	R4049	E4125
L3283	Q3378	L3445	Q3511	N3550	D3673	I3740	R3814	F3897	K3980	K4050	P4126
H3284	R3379	V3446	R3512	R3593	S3674	R3741	L3815	L3898	S3982	L4051	W4127
H3285	R3380	Y3447	A3513	L3596	K3675	G3742	L3816	P3894	I3983	A4052	M4128
C3286	A3381	K3448	Y3514	ALA	P3676	D3744	L3817	F3894	M3984	A4053	
R3287	F3382	Q3515	R3516	THR	P3677	H3743	D3744	F3897	H3986	A4054	
S3288	H3384	R3516	H3517	PRO	L3680	E3747	E3747	L3898	R3992	P4056	
R3289	H3385	A3453	R3518	VAL	K3681	H3748	H3748	M3820	S3993	A4057	
G3292	L3385	L3454	E3519	ASN	E3682	P3749	P3749	K3825	D3994	V4058	
T3299	S3387	E3459	E3520	LYS	C3683	F3750	L3751	R3928	P3995	T4060	
V3300	A3388	L3469	I3521	K3604	S3684	V3752	Y3828	M3929	G3996	C4061	
L3301	V3389	E3460	Y3525	K3608	M3687	G3755	L3829	V3930	L3997	E4063	
K3302	Q3390	A3461	R3530	M3609	D3688	E3756	D3831	E3933	L3998	L4064	
T3303	ALA	R3462	Y3531	R3612	P3690	D3757	P3832	T3934	M4000	H4068	
V3304	GLN	P3466	I3534	Y3613	K3691	L3758	R3833	T3934	T4001	A4081	
S3313	PRO	R3467	R3538	L3617	V3692	Q3759	A3834	L3938	D0102	R4082	
S3314	PRO	R3468	S3539	G3618	F3694	D3761	P3836	G3939	M4013	K4085	
S3317	TRP	L3469	TYR	G3618	L3695	Q3762	C3837	I3940	K4014	I4089	
K3318	TRP	Q3470	SER	L3625	L3699	R3763	E3838	V3930	M4015	R4090	
K3318	CYS	L3472	PHE	G3626	E3700	V3764	K3840	E3933	L4015	P4094	
R3319	GLY	R3474	LYS	A3627	I3701	L3767	D3841	T3934	L4015	L4098	
I3320	PRO	Y3475	ASP	F3628	Q3704	F3768	W3842	L3938	L4015	S4099	
F3323	ALA	P3476	S3545	Q3629	Y3705	Q3769	L3843	G3939	M4015	E4100	
Q3326	Y3413	E3477	S3546	R3629	D3706	M3771	THR	D3941	PHE	F4101	
R3327	L3416	E3478	T3547	R3629	R3706	M3771	LYS	I3940	GLU	T4102	
L3329	F3419	R3482	R3548	F3632	R3708	N3772	LYS	H3944	GLN	Q4103	
L3330	C3420	K3483	H3549	F3632	R3708	G3773	Y3855	A3945	TRP	L4104	
R3335	D3421	E3486	K3550	L3633	G3709	I3774	M3856	S3948	LYS	E4104	
W3339	Q3422	R3488	R3552	Q3634	L3712	L3775	D3851	P3954	GLY	F4104	
C3347	Q3423	S3488	K3552	Q3634	E3714	D3778	L3851	L3958	GLY	T4104	
L3348	L3424	V3489	E3552	LEU	E3714	S3779	L3851	L3958	LYS	Q4104	
A3349	R3425	Y3490	F3554	LEU	H3716	S3779	Y3855	P3954	LYS	V4104	
I3351	R3425	V3490	V3555	LEU	V3717	S3782	M3856	L3958	GLY	E4104	
E3352	E3428	S3488	R3557	LEU	R3718	S3782	Y3859	L3958	SER	T4104	
E3353	F3429	S3489	I3558	ARG	I3719	A3785	K3860	F3961	TRP	Q4103	
D3354	ASN	V3490	K3561	ARG	A3720	L3786	K3860	R3962	ILE	L4104	
	ALA	P3491	P3491	MET	G3721	Q3787	R3864	L3963	GLN	K4105	
	ALA	C3492	L3562	LEU	F3722	L3788	R3864	R3965	GLU	C4106	
	VAL	Q3494	F3571	S3657	D3723	L3788	V3868	Q3966	ILE	L4107	
		F3495	F3571	D3658	E3724	S3782	T3869	Q3966	ASN	L4107	
		L3496	A3574	D3658	R3725	S3782	S3870	F3967	VAL	A4111	
		S3497	L3575	N3660	V3726	P3795	R3870	I3968	ALA	T4112	
		W3498	D3576	D3661	T3727	M3796	R3872	N3969	GLU	D4113	

• Molecule 2: DNA repair protein XRCC4



M1	V11	P14	S15	I16	T17	H18	F19	L20	Q21	V22	S23	W24	E25	K26	T27	L28	E29	S30	G31	F32	V33	I34	T35	H40	S41	A42	V43	T44	G45	T46	V47	S48	E49	S50	E51	I52	S53	Q54	E55	A56	M59	A60	M61	K63	G64	R71	K72
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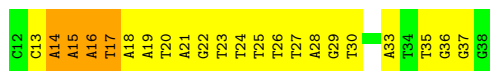







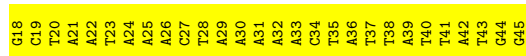




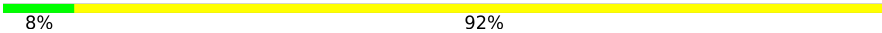


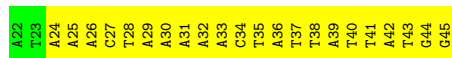
- Molecule 9: DNA (27-MER)

Chain E:  100%



- Molecule 10: DNA (28-MER)

Chain I:  8% 92%



- Molecule 11: DNA (24-MER)

Chain J:  25% 71%



## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	11019	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	48.03	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	130000	Depositor
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.720	Depositor
Minimum map value	-0.164	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.026	Depositor
Recommended contour level	0.168	Depositor
Map size (Å)	678.08, 678.08, 678.08	wwPDB
Map dimensions	520, 520, 520	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.304, 1.304, 1.304	Depositor

## 5 Model quality [i](#)

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

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	0.30	0/28804	0.50	0/38906
1	F	0.30	0/28820	0.50	1/38928 (0.0%)
2	K	0.26	0/1657	0.48	0/2228
2	L	0.26	0/1616	0.50	0/2170
2	N	0.27	0/1654	0.50	0/2224
2	O	0.27	0/1616	0.50	0/2170
3	M	0.28	0/2134	0.48	0/2884
3	P	0.28	0/2028	0.51	0/2737
4	Q	0.28	0/1778	0.55	0/2403
4	R	0.27	0/1831	0.56	0/2476
5	a	0.29	0/4116	0.51	0/5549
5	h	0.29	0/4105	0.50	0/5538
6	b	0.27	0/5313	0.48	0/7159
6	j	0.28	0/5178	0.49	1/6979 (0.0%)
7	c	0.29	0/169	0.38	0/226
7	i	0.28	0/166	0.38	0/222
8	D	0.70	0/622	1.16	4/959 (0.4%)
9	E	0.70	0/647	0.96	0/996
10	I	0.72	0/555	1.00	0/854
11	J	0.80	0/548	1.15	1/844 (0.1%)
All	All	0.31	0/93357	0.53	7/126452 (0.0%)

There are no bond length outliers.

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	D	14	DA	P-O3'-C3'	-8.45	109.56	119.70
8	D	17	DT	P-O3'-C3'	-8.05	110.04	119.70
8	D	16	DA	P-O3'-C3'	-7.49	110.71	119.70
1	F	956	PRO	N-CA-CB	6.07	110.58	103.30
11	J	31	DT	O4'-C4'-C3'	-5.70	102.22	104.50
8	D	15	DA	P-O3'-C3'	-5.67	112.90	119.70
6	j	389	MET	CB-CG-SD	-5.13	97.00	112.40

There are no chirality outliers.

There are no planarity outliers.

## 5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	28250	0	28465	1559	0
1	F	28263	0	28500	1573	0
2	K	1628	0	1620	123	0
2	L	1589	0	1581	99	0
2	N	1625	0	1612	120	0
2	O	1589	0	1587	120	0
3	M	2085	0	2024	144	0
3	P	1983	0	1924	130	0
4	Q	1745	0	1754	132	0
4	R	1796	0	1814	143	0
5	a	4038	0	4092	0	0
5	h	4026	0	4069	0	0
6	b	5214	0	5231	0	0
6	j	5082	0	5069	0	0
7	c	165	0	160	0	0
7	i	162	0	151	0	0
8	D	556	0	310	58	0
9	E	576	0	318	53	0
10	I	494	0	273	44	0
11	J	491	0	278	45	0
All	All	91357	0	90832	4131	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 29.

All (4131) 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:F:2440:TYR:HA	1:F:2443:MET:HE3	1.39	1.01
1:F:1269:THR:O	1:F:1273:GLU:HB2	1.66	0.95
1:F:1268:ASN:HD21	1:F:1344:PHE:HA	1.34	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2225:HIS:HB2	1:F:2231:PHE:HB2	1.51	0.91
4:Q:131:VAL:HG12	4:R:44:VAL:HG22	1.50	0.91
2:O:3:ARG:HE	2:O:23:SER:HB3	1.34	0.90
1:F:1878:ASP:HB3	1:F:1947:CYS:HA	1.54	0.89
1:F:139:ARG:HA	1:F:142:ARG:HH21	1.36	0.88
1:A:3301:LEU:HG	1:A:3305:SER:H	1.37	0.87
1:F:2126:MET:O	1:F:2130:HIS:HB2	1.74	0.87
1:A:1300:SER:HA	1:A:1304:HIS:HB2	1.57	0.87
1:A:1071:ASN:HD21	1:A:1073:PHE:HB2	1.38	0.86
2:O:94:TYR:HE1	2:O:111:PHE:HB2	1.38	0.86
1:A:2925:GLU:HA	1:A:2928:LYS:HE3	1.58	0.86
1:A:2225:HIS:HB2	1:A:2231:PHE:HB2	1.57	0.85
1:F:1452:VAL:HG22	1:F:1517:LEU:HD11	1.58	0.85
1:A:1206:LEU:HA	1:A:1209:LYS:HD3	1.59	0.84
1:A:3029:LYS:N	1:A:3032:SER:HG	1.76	0.84
1:A:3796:MET:H	1:A:3801:GLY:HA2	1.42	0.84
1:F:3011:LEU:HB3	1:F:3047:SER:HB2	1.60	0.84
2:K:8:ILE:HG21	2:K:20:LEU:HB2	1.60	0.83
3:P:814:ARG:H	3:P:850:ALA:N	1.77	0.83
1:F:1583:MET:HG3	1:F:1625:HIS:HB3	1.60	0.82
1:A:3835:PRO:HA	1:A:3839:TYR:HB2	1.59	0.82
4:Q:130:LEU:HA	4:R:42:GLN:HA	1.60	0.82
1:F:3422:GLN:HE22	1:F:3423:GLN:HE21	1.24	0.81
1:A:1071:ASN:HD22	1:A:1074:LYS:HG3	1.43	0.81
2:O:50:SER:H	2:O:54:GLN:HE21	1.29	0.81
1:F:1871:MET:HE1	1:F:1940:TYR:HA	1.60	0.80
4:Q:132:SER:HA	4:R:40:ASP:H	1.46	0.80
1:F:334:HIS:HA	1:F:337:LYS:HE3	1.64	0.80
1:F:168:ASP:H	1:F:171:LEU:HD12	1.46	0.80
1:F:361:ILE:HD13	1:F:364:ARG:HH21	1.45	0.80
2:N:95:PHE:HB3	2:N:111:PHE:HB2	1.62	0.79
1:F:901:MET:HG2	1:F:903:PRO:HD3	1.63	0.79
1:A:2891:ARG:HG2	1:A:3894:PRO:HB3	1.63	0.79
1:F:2806:LYS:HE2	1:F:2857:CYS:HB2	1.64	0.79
4:R:24:LEU:HB2	4:R:38:VAL:HG13	1.63	0.79
1:F:414:LEU:HB2	1:F:460:ALA:HB1	1.64	0.78
1:A:2174:SER:HB3	1:A:2214:ARG:HH12	1.46	0.78
1:F:1115:HIS:HE1	1:F:1183:CYS:H	1.27	0.78
9:E:30:DA:OP1	9:E:31:DA:N6	2.17	0.78
1:F:2551:GLU:HA	1:F:2554:PHE:HB2	1.65	0.78
2:N:173:GLU:HB2	2:O:172:LEU:HD21	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2433:LYS:HG3	1:A:2472:GLN:HE22	1.46	0.78
1:A:2965:TYR:HB3	1:A:3001:CYS:HB2	1.63	0.78
1:A:67:VAL:HA	1:A:71:LYS:HZ1	1.49	0.78
1:A:864:GLY:H	1:A:3169:PRO:HA	1.48	0.78
1:A:1201:ASN:HB2	1:A:1207:TRP:HB2	1.65	0.78
1:F:3301:LEU:HB3	1:F:3304:VAL:HA	1.66	0.78
2:O:28:LEU:HD11	2:O:71:ARG:HA	1.63	0.77
1:A:1172:LEU:HD11	1:A:1187:SER:HB2	1.65	0.77
2:N:124:ARG:HD3	2:O:16:ILE:HG21	1.67	0.77
4:R:16:LEU:HD13	4:R:106:LEU:HD11	1.67	0.77
1:A:3750:PHE:HB3	1:A:3802:LEU:HD11	1.65	0.77
1:A:167:PRO:HA	1:A:171:LEU:HD12	1.66	0.77
10:I:40:DT:H3	11:J:18:DA:H8	1.29	0.77
1:F:1070:PRO:HG2	1:F:3715:TYR:HB3	1.65	0.77
2:O:28:LEU:HD22	2:O:74:LEU:HB2	1.67	0.77
1:A:2948:GLY:HA3	1:A:2954:GLN:HE21	1.50	0.77
1:F:3162:ASN:ND2	1:F:3234:CYS:SG	2.59	0.76
1:F:3512:VAL:HA	1:F:3515:GLN:HE21	1.49	0.76
1:A:3958:LEU:HG	1:A:4060:THR:HG21	1.68	0.76
2:O:99:LYS:HE3	2:O:101:LEU:HB2	1.68	0.76
4:Q:129:SER:HA	4:R:44:VAL:HB	1.68	0.76
1:F:2572:TYR:HE1	1:F:2791:ILE:HD11	1.50	0.76
1:A:3639:GLU:HA	1:A:3642:LYS:HE3	1.68	0.76
1:A:2791:ILE:HA	1:A:2794:LEU:HD12	1.67	0.75
2:O:22:VAL:HG23	2:O:35:THR:H	1.50	0.75
1:A:1685:ASP:HB3	1:A:1688:LEU:HG	1.68	0.75
1:F:3574:ALA:HB1	1:F:3681:LYS:HE2	1.68	0.75
8:D:27:DT:H2''	8:D:28:DA:C5	2.21	0.75
1:A:3359:ILE:HA	1:A:3362:LEU:HB3	1.69	0.75
1:F:1934:LEU:HD13	1:F:1937:ARG:HE	1.51	0.75
1:A:90:CYS:SG	1:A:133:LYS:NZ	2.60	0.74
2:K:24:TRP:HA	2:K:33:VAL:H	1.52	0.74
3:P:800:GLU:HA	3:P:805:TRP:HB2	1.69	0.74
1:A:105:VAL:O	1:A:108:LYS:HB3	1.88	0.74
2:L:96:PHE:HA	2:L:109:GLY:HA3	1.68	0.74
1:F:2526:SER:HA	1:F:2531:LEU:HD12	1.67	0.74
1:A:3084:GLN:HE22	1:A:3134:ALA:HB1	1.53	0.74
1:A:3638:LYS:HZ3	1:A:3642:LYS:HE2	1.53	0.74
3:M:719:ASP:HA	3:M:746:MET:HA	1.69	0.74
1:A:197:PHE:O	1:A:246:ARG:NH2	2.21	0.74
1:F:2981:TRP:HD1	1:F:2985:GLU:HG2	1.53	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:45:GLY:HA3	2:K:113:LEU:HD13	1.70	0.74
1:F:1296:PHE:HA	1:F:1299:GLU:HG2	1.68	0.74
1:F:919:LEU:HG	1:F:920:THR:HG23	1.68	0.74
1:A:3559:LYS:HA	1:A:3562:LEU:HG	1.70	0.74
3:P:902:GLU:OE1	3:P:904:GLN:NE2	2.20	0.74
1:A:1590:THR:HG21	1:A:1641:THR:HG23	1.70	0.73
1:F:72:SER:H	1:F:82:ARG:NH2	1.85	0.73
1:A:1686:LEU:HA	1:A:1689:LYS:HD2	1.70	0.73
1:A:2367:VAL:O	1:A:2371:PHE:N	2.21	0.73
1:A:1805:PHE:HZ	1:A:1869:LYS:HA	1.52	0.73
9:E:44:DG:H2''	9:E:45:DG:H3'	1.70	0.73
1:A:1766:LEU:HD11	1:A:1775:GLU:HG2	1.71	0.73
1:F:785:MET:HA	1:F:788:TYR:CZ	2.23	0.73
1:F:3269:ARG:HB2	1:F:3272:TRP:HB3	1.69	0.73
3:M:797:ALA:HB2	3:M:814:ARG:HB3	1.70	0.73
1:F:2940:ARG:NH2	1:F:3978:GLY:O	2.21	0.73
2:K:97:PHE:H	2:K:109:GLY:HA3	1.51	0.73
1:A:2893:LEU:HD23	1:A:2926:LEU:HG	1.70	0.73
2:O:163:GLU:HA	3:P:846:ARG:HH22	1.53	0.73
1:A:3831:ASP:HB3	1:A:3832:PRO:HD3	1.71	0.73
1:A:2138:VAL:O	1:A:2143:ARG:NH2	2.22	0.73
1:F:675:ARG:HA	1:F:678:LYS:HE2	1.70	0.73
1:F:3048:LYS:HA	1:F:3051:LEU:HD12	1.71	0.73
3:P:814:ARG:H	3:P:850:ALA:H	1.37	0.73
1:A:3301:LEU:HB3	1:A:3304:VAL:HA	1.71	0.72
1:F:1420:ARG:NH2	1:F:1465:HIS:O	2.21	0.72
2:K:17:THR:H	2:L:124:ARG:HE	1.35	0.72
4:Q:185:GLU:HG3	4:Q:188:SER:HB3	1.71	0.72
1:A:3354:ASP:O	1:A:3358:ARG:NH1	2.22	0.72
1:A:3898:LEU:HD22	1:A:3901:ARG:HH21	1.52	0.72
2:K:1:MET:HG2	2:K:23:SER:HB2	1.72	0.72
2:O:31:GLY:H	2:O:52:ILE:HG21	1.54	0.72
1:F:3982:SER:O	1:F:3986:HIS:ND1	2.22	0.72
4:Q:136:ILE:HG23	4:Q:139:LEU:HD23	1.71	0.72
1:F:1751:GLU:O	1:F:1788:ARG:NH1	2.22	0.72
1:A:901:MET:HG2	1:A:903:PRO:HD3	1.72	0.72
1:A:2133:LEU:HD11	1:A:2171:LEU:HD22	1.71	0.72
1:F:3380:ARG:O	1:F:3384:HIS:ND1	2.23	0.72
1:A:128:LEU:HD21	1:A:170:VAL:HB	1.72	0.72
1:A:4055:ASN:HB2	1:A:4095:GLU:HA	1.70	0.72
1:F:3713:PRO:O	1:F:3716:HIS:NE2	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:R:210:PHE:HA	4:R:214:LEU:HD12	1.72	0.72
1:F:988:VAL:HA	1:F:991:LEU:HD12	1.70	0.72
1:F:2967:GLU:O	1:F:2971:GLN:NE2	2.21	0.72
1:F:3278:GLN:HB3	1:F:3282:ARG:HH12	1.54	0.72
1:A:415:GLN:O	1:A:463:LYS:NZ	2.22	0.72
1:F:899:ARG:HH22	1:F:2566:THR:HA	1.55	0.72
1:F:415:GLN:O	1:F:463:LYS:NZ	2.23	0.71
2:K:29:GLU:HA	2:K:52:ILE:HG21	1.72	0.71
1:F:958:MET:HB3	1:F:961:LEU:HB3	1.71	0.71
4:R:131:VAL:HG13	4:R:135:LEU:HD22	1.71	0.71
4:R:142:MET:HA	4:R:221:VAL:HG22	1.71	0.71
1:A:1169:VAL:HG11	1:A:1198:LEU:HD11	1.70	0.71
1:F:1821:ASP:OD1	1:F:1875:LYS:NZ	2.23	0.71
3:M:887:LYS:HG2	3:M:911:ILE:HG23	1.72	0.71
1:A:3718:ARG:H	1:A:3743:HIS:CE1	2.08	0.71
3:M:809:PRO:O	3:M:848:HIS:ND1	2.23	0.71
2:N:10:LEU:HD21	2:N:18:HIS:HD2	1.55	0.71
1:A:793:LEU:HD12	1:A:869:ASN:HB2	1.71	0.71
1:F:847:SER:N	1:F:850:GLU:OE2	2.23	0.71
1:F:1210:ASP:HA	1:F:1213:LYS:HD2	1.72	0.71
3:P:841:LYS:HD3	3:P:867:GLU:H	1.54	0.71
1:A:2577:PHE:O	1:A:2784:GLN:NE2	2.24	0.71
1:F:933:LEU:HB2	1:F:2793:PRO:HB2	1.72	0.71
1:F:2298:GLU:HG2	1:F:2301:GLN:HB3	1.72	0.71
4:Q:156:LEU:HG	4:Q:160:LYS:HD2	1.73	0.71
1:F:3090:TYR:HB3	1:F:3095:ASP:HB3	1.73	0.71
1:A:3811:THR:HG23	1:A:3814:ASP:H	1.55	0.71
1:F:469:ALA:HA	1:F:475:LEU:HD13	1.73	0.71
1:F:1045:THR:HB	1:F:1048:GLN:HG2	1.72	0.71
1:A:1028:PHE:HA	1:A:1031:ARG:HE	1.55	0.70
1:F:2380:ASN:OD1	1:F:2381:ALA:N	2.23	0.70
2:N:102:LYS:HZ2	4:Q:79:LEU:HD13	1.56	0.70
1:A:449:TYR:O	1:A:454:GLN:NE2	2.24	0.70
1:A:455:LEU:HB2	1:A:459:ARG:HH21	1.55	0.70
1:A:1611:GLN:NE2	1:A:1614:GLN:OE1	2.24	0.70
2:O:10:LEU:HB3	2:O:13:GLU:H	1.56	0.70
1:A:527:TYR:O	1:A:530:LEU:HB3	1.91	0.70
1:A:1766:LEU:O	1:A:1822:ARG:NH1	2.24	0.70
2:L:158:VAL:HA	2:L:161:ARG:HG2	1.72	0.70
2:N:192:ARG:NH2	3:P:768:ASP:OD1	2.25	0.70
4:Q:130:LEU:CA	4:R:42:GLN:HA	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:718:MET:HB2	1:A:726:LEU:HD11	1.74	0.70
1:A:4115:ASN:OD1	1:A:4116:ILE:N	2.23	0.70
4:Q:132:SER:HA	4:R:40:ASP:N	2.05	0.70
1:F:89:LEU:HB3	1:F:133:LYS:HE2	1.74	0.70
1:F:1307:ILE:HG23	1:F:1309:ALA:H	1.55	0.70
1:F:1934:LEU:HD22	1:F:1937:ARG:HH21	1.56	0.70
4:R:36:LEU:O	4:R:46:HIS:NE2	2.25	0.70
1:A:908:ASP:HA	1:A:911:LEU:HD23	1.73	0.70
1:A:1117:ASP:O	1:A:1119:LYS:NZ	2.21	0.70
1:A:3581:PRO:HB2	1:A:3617:LEU:HD11	1.74	0.70
1:F:1047:GLN:HG3	1:F:1051:LYS:HZ1	1.57	0.70
1:F:1071:ASN:HD21	1:F:1073:PHE:HB2	1.55	0.70
3:P:671:ASP:HB3	3:P:723:PRO:HG3	1.74	0.70
1:A:1867:ILE:HA	1:A:1870:LYS:HD2	1.74	0.70
1:F:2157:PHE:HB2	1:F:2160:TYR:HB3	1.74	0.70
1:F:2891:ARG:HD3	1:F:3898:LEU:HD11	1.73	0.70
1:F:3681:LYS:HD3	1:F:3687:MET:HG3	1.73	0.70
1:A:2514:ASN:HD22	1:A:2517:LEU:HG	1.56	0.70
1:F:2327:LEU:O	1:F:2333:ARG:NH2	2.24	0.70
2:K:128:CYS:HA	2:L:7:ARG:HH12	1.56	0.70
10:I:36:DA:H2	11:J:22:DG:H1	1.37	0.70
1:A:2127:LYS:NZ	1:A:2160:TYR:OH	2.24	0.69
1:F:449:TYR:O	1:F:454:GLN:NE2	2.24	0.69
1:A:142:ARG:NH2	1:A:181:LEU:O	2.25	0.69
1:A:2526:SER:O	1:A:2538:ARG:NH2	2.26	0.69
1:A:3608:LYS:HG3	1:A:3612:ARG:HE	1.57	0.69
1:F:1568:ASN:HD22	1:F:1603:GLN:HB2	1.57	0.69
1:F:1766:LEU:HD11	1:F:1775:GLU:HG2	1.73	0.69
2:K:96:PHE:HA	2:K:110:SER:H	1.57	0.69
1:A:3465:PHE:HA	1:A:3468:LEU:HD12	1.72	0.69
1:F:2260:PHE:O	1:F:2270:ASN:ND2	2.24	0.69
2:N:3:ARG:HH22	2:N:122:VAL:HG23	1.57	0.69
1:A:1803:GLU:HA	1:A:1806:ARG:HH21	1.56	0.69
1:A:2967:GLU:HA	1:A:2970:LYS:HE2	1.74	0.69
1:F:3266:SER:HB3	1:F:3273:LEU:HA	1.72	0.69
1:F:3928:PHE:HE1	1:F:3962:ARG:HG3	1.57	0.69
3:M:809:PRO:HA	3:M:812:MET:HE3	1.73	0.69
9:E:26:DA:C2	9:E:27:DC:H2'	2.28	0.69
10:I:40:DT:N3	11:J:18:DA:H8	1.91	0.69
1:A:93:LEU:HD22	1:A:136:GLN:HB3	1.75	0.69
1:F:2274:ILE:HA	1:F:2277:LEU:HD12	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:715:ALA:O	1:A:719:LYS:NZ	2.24	0.69
1:A:1139:GLU:HA	1:A:1197:LEU:HD11	1.75	0.69
1:F:2168:LEU:O	1:F:2172:ALA:N	2.24	0.69
1:F:3114:TYR:HA	1:F:3117:ILE:HD12	1.73	0.69
1:F:3740:ILE:O	1:F:3748:HIS:N	2.22	0.69
1:F:3811:THR:HG23	1:F:3814:ASP:H	1.58	0.69
2:N:22:VAL:HG11	2:N:71:ARG:HH12	1.57	0.69
4:Q:136:ILE:HA	4:Q:139:LEU:HB3	1.74	0.69
1:A:4008:GLU:HG3	1:A:4011:PHE:HB2	1.72	0.69
1:F:105:VAL:O	1:F:109:ASN:ND2	2.25	0.69
1:F:3554:PHE:HA	1:F:3557:ARG:HE	1.58	0.69
1:F:3796:MET:H	1:F:3801:GLY:HA2	1.58	0.69
1:A:3123:GLN:OE1	1:A:3123:GLN:N	2.24	0.69
1:F:802:THR:O	1:F:852:ARG:NH1	2.25	0.69
1:F:1379:PRO:O	1:F:1382:ILE:HG12	1.92	0.69
3:P:681:ARG:HH21	3:P:730:PHE:HB3	1.57	0.69
1:F:1156:GLY:O	1:F:1171:TRP:NE1	2.25	0.68
1:F:3609:MET:HA	1:F:3612:ARG:HE	1.56	0.68
1:F:3913:ILE:HD12	1:F:3984:MET:HB2	1.74	0.68
1:A:1829:TRP:O	1:A:1883:ARG:NH2	2.26	0.68
2:K:187:LYS:HA	2:K:190:LYS:HD2	1.75	0.68
2:N:174:THR:HG22	2:N:178:LYS:HZ2	1.57	0.68
4:Q:144:LEU:HG	4:R:214:LEU:HD11	1.75	0.68
1:A:2510:LEU:O	1:A:2518:GLN:NE2	2.26	0.68
1:A:3311:ASN:HB2	1:A:3314:SER:HA	1.75	0.68
1:F:2928:LYS:O	1:F:2932:SER:N	2.25	0.68
4:R:136:ILE:HG23	4:R:139:LEU:HD12	1.76	0.68
1:F:753:GLN:HE22	1:F:792:ILE:HA	1.56	0.68
1:F:1196:PRO:HG3	1:F:1203:SER:HB2	1.74	0.68
1:F:1415:LEU:O	1:F:1419:LEU:N	2.22	0.68
3:M:819:TYR:HB3	3:M:863:VAL:HG22	1.76	0.68
10:I:29:DA:H1'	10:I:30:DA:C8	2.28	0.68
1:A:1397:ASP:OD1	1:A:1398:VAL:N	2.26	0.68
1:A:2437:ASP:OD1	1:A:2472:GLN:NE2	2.26	0.68
1:A:3110:PHE:HE1	1:A:3128:LYS:HG3	1.59	0.68
1:F:1528:LEU:HD23	1:F:1531:LEU:HD12	1.74	0.68
1:F:1851:LEU:O	1:F:1870:LYS:NZ	2.26	0.68
1:F:3755:GLY:HA2	1:F:3799:ARG:HA	1.76	0.68
1:F:3929:MET:O	1:F:3938:ILE:N	2.23	0.68
1:A:2151:ILE:HG12	1:A:2192:THR:HG21	1.76	0.68
1:A:2746:LYS:HD2	8:D:14:DA:N7	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2479:TRP:O	1:F:2483:ASN:ND2	2.21	0.68
2:O:10:LEU:HD21	2:O:38:ASP:HA	1.75	0.68
3:P:889:LEU:HD12	3:P:903:LEU:HG	1.75	0.68
1:A:2507:ILE:HA	1:A:2510:LEU:HD23	1.75	0.68
2:N:29:GLU:HB3	2:N:52:ILE:HD11	1.76	0.68
3:P:758:TYR:HA	3:P:764:SER:HA	1.75	0.68
1:A:2988:GLU:HA	1:A:2991:LYS:HE2	1.76	0.68
1:F:2986:PRO:O	1:F:2991:LYS:NZ	2.27	0.68
1:F:3897:PHE:HD2	1:F:3898:LEU:HD12	1.57	0.68
1:A:1415:LEU:O	1:A:1419:LEU:N	2.25	0.68
1:A:3677:PRO:HG2	1:A:3682:GLU:H	1.59	0.68
1:F:1071:ASN:HD22	1:F:1074:LYS:HG3	1.57	0.68
1:F:1505:LEU:HA	1:F:1508:LYS:HD2	1.76	0.68
4:Q:136:ILE:HB	4:R:40:ASP:HA	1.76	0.68
4:R:8:LEU:HG	4:R:37:LEU:HD12	1.76	0.68
1:F:1685:ASP:HB3	1:F:1688:LEU:HG	1.75	0.68
4:R:9:LEU:HD13	4:R:134:HIS:HB3	1.76	0.68
1:A:2232:ARG:HD2	1:A:2235:LEU:HD12	1.76	0.67
1:A:3686:TRP:HA	1:A:3689:ASP:HB3	1.76	0.67
1:F:61:ARG:NH1	1:F:62:ASP:OD1	2.26	0.67
1:F:207:GLN:NE2	1:F:215:PRO:O	2.27	0.67
2:L:174:THR:HG23	3:M:792:MET:HG2	1.76	0.67
3:M:818:VAL:HG21	3:M:845:LEU:HD22	1.76	0.67
4:Q:184:PHE:HB2	4:R:160:LYS:HD2	1.76	0.67
1:F:3954:PRO:O	1:F:4068:HIS:NE2	2.25	0.67
4:R:107:ARG:HH21	4:R:121:PHE:H	1.41	0.67
1:A:1151:ARG:HB2	1:A:1163:LEU:HD12	1.76	0.67
1:F:865:GLN:N	1:F:3170:ASP:OD1	2.27	0.67
1:F:1685:ASP:OD1	1:F:1738:ASN:ND2	2.26	0.67
4:Q:77:ASP:O	4:Q:81:ARG:NH1	2.27	0.67
1:A:3085:GLU:OE1	1:A:3085:GLU:N	2.27	0.67
1:F:3727:THR:O	1:F:3737:ARG:N	2.28	0.67
1:A:3321:LEU:HD13	1:A:3324:ARG:HH12	1.59	0.67
1:F:1067:ALA:HA	1:F:1075:ARG:HA	1.76	0.67
1:F:1771:GLN:HA	1:F:1775:GLU:HG3	1.77	0.67
1:F:3878:VAL:O	1:F:3965:ARG:NH1	2.26	0.67
1:F:378:ALA:O	1:F:381:VAL:HB	1.93	0.67
3:M:728:GLU:OE2	3:M:739:GLN:NE2	2.27	0.67
3:P:813:PHE:HB2	3:P:848:HIS:HD2	1.58	0.67
1:A:3675:LYS:NZ	1:A:3676:PRO:O	2.27	0.67
3:P:654:LYS:N	3:P:660:GLU:OE2	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:208:MET:HE3	1:A:252:VAL:HG12	1.77	0.67
1:A:2274:ILE:HD13	1:A:2319:ALA:HB2	1.77	0.67
1:A:3312:VAL:O	1:A:3316:LEU:N	2.25	0.67
1:F:66:LEU:O	1:F:70:ARG:N	2.25	0.67
1:F:530:LEU:O	1:F:534:LEU:N	2.26	0.67
1:F:2372:PRO:O	1:F:2404:ARG:NH1	2.28	0.67
4:R:175:ILE:HG12	4:R:179:LEU:HD11	1.77	0.67
1:A:652:GLU:HA	1:A:655:LEU:HD12	1.77	0.67
1:F:1766:LEU:O	1:F:1822:ARG:NH1	2.27	0.67
1:A:3924:HIS:O	1:A:3927:ASN:ND2	2.28	0.67
1:F:1013:ILE:HA	1:F:1017:ILE:HD12	1.76	0.67
1:F:2311:ARG:NH1	1:F:2311:ARG:O	2.27	0.67
1:F:3763:ARG:NH1	1:F:4002:MET:O	2.28	0.67
1:F:3835:PRO:HA	1:F:3839:TYR:HB2	1.77	0.67
1:F:3873:LYS:O	1:F:3877:LYS:HB2	1.94	0.67
2:K:33:VAL:HG13	2:K:46:THR:HG22	1.77	0.67
3:M:843:LEU:O	3:M:847:PHE:HB3	1.95	0.67
1:A:1740:VAL:HA	1:A:1743:MET:SD	2.34	0.66
1:A:3806:LEU:HD22	1:A:3809:THR:HB	1.76	0.66
1:F:884:VAL:HG21	1:F:3933:GLU:HA	1.77	0.66
1:F:1424:THR:O	1:F:1426:GLN:NE2	2.27	0.66
1:F:2229:ALA:O	1:F:2233:HIS:N	2.24	0.66
3:P:814:ARG:N	3:P:850:ALA:H	1.91	0.66
2:N:159:GLN:OE1	2:O:161:ARG:NH2	2.28	0.66
1:A:1782:PHE:HD1	1:A:1827:LEU:HD21	1.60	0.66
1:A:3254:LEU:N	1:A:3256:MET:SD	2.68	0.66
1:F:2234:ASN:HA	1:F:2237:ILE:HD12	1.76	0.66
1:F:3992:ARG:NH1	1:F:4051:LEU:O	2.29	0.66
3:M:701:ILE:HD12	3:M:726:LEU:HD21	1.77	0.66
1:A:418:ALA:HB2	1:A:464:VAL:HG12	1.76	0.66
3:M:811:SER:HB2	3:M:814:ARG:HH21	1.60	0.66
11:J:20:DT:H2'	11:J:21:DA:C8	2.29	0.66
1:F:71:LYS:HB2	1:F:82:ARG:NH2	2.11	0.66
1:F:3722:PHE:HA	1:F:3741:ARG:HB3	1.77	0.66
1:A:86:LEU:O	1:A:133:LYS:NZ	2.27	0.66
1:A:675:ARG:HA	1:A:678:LYS:HE2	1.77	0.66
1:F:2584:CYS:SG	1:F:2585:GLU:N	2.68	0.66
1:F:2891:ARG:HG2	1:F:3894:PRO:HB3	1.78	0.66
1:F:3970:LEU:HG	1:F:3971:MET:SD	2.36	0.66
3:P:890:LYS:N	3:P:904:GLN:O	2.26	0.66
1:F:2791:ILE:HA	1:F:2794:LEU:HD12	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3126:LEU:O	1:F:3130:GLN:NE2	2.24	0.66
10:I:42:DA:N6	11:J:19:DA:OP2	2.28	0.66
1:F:803:SER:HA	1:F:852:ARG:HH12	1.61	0.66
1:F:1231:GLN:HA	1:F:1289:SER:HB2	1.76	0.66
1:F:2931:ARG:HH22	1:F:3000:ASP:HB3	1.61	0.66
1:F:1871:MET:CE	1:F:1940:TYR:HA	2.26	0.66
3:M:741:ARG:NH2	3:M:762:GLY:O	2.29	0.66
1:A:738:HIS:O	1:A:742:GLU:HG3	1.95	0.65
1:F:145:ASP:O	1:F:148:LYS:NZ	2.26	0.65
1:F:538:ASP:HA	1:F:541:MET:HG3	1.76	0.65
2:K:164:LYS:NZ	3:M:897:SER:O	2.29	0.65
4:R:49:VAL:HG11	4:R:57:ARG:HH21	1.62	0.65
1:A:82:ARG:HA	1:A:85:ILE:HD12	1.78	0.65
1:A:1416:GLU:HA	1:A:1419:LEU:HB3	1.78	0.65
1:A:2986:PRO:O	1:A:2991:LYS:NZ	2.29	0.65
1:A:3588:TRP:HE1	1:A:3609:MET:CG	2.09	0.65
1:A:3680:LEU:HA	1:A:3724:GLU:HB3	1.76	0.65
1:F:2254:ARG:NH2	1:F:2292:CYS:SG	2.69	0.65
4:R:161:ASP:HB3	4:R:183:PRO:HA	1.78	0.65
1:A:531:PHE:HA	1:A:534:LEU:HB2	1.78	0.65
1:A:1071:ASN:ND2	1:A:1073:PHE:HB2	2.11	0.65
1:A:2404:ARG:NH2	1:A:2406:GLU:OE2	2.29	0.65
1:A:3192:LYS:HD2	1:A:3196:LYS:HZ1	1.61	0.65
1:F:1444:ASP:HA	1:F:1447:ARG:HH21	1.61	0.65
1:F:3157:LEU:O	1:F:3161:LEU:N	2.29	0.65
1:F:3758:LEU:HB2	1:F:3795:PRO:HB3	1.78	0.65
1:F:3924:HIS:O	1:F:3927:ASN:ND2	2.28	0.65
8:D:25:DT:N3	9:E:33:DA:OP1	2.25	0.65
1:F:2532:PRO:HD2	1:F:2538:ARG:HA	1.78	0.65
2:N:168:ALA:HB1	3:P:810:LEU:HD21	1.78	0.65
2:O:20:LEU:HD22	2:O:37:THR:HG22	1.78	0.65
3:P:746:MET:O	3:P:751:LYS:NZ	2.30	0.65
4:R:207:GLY:HA2	4:R:210:PHE:HB3	1.78	0.65
1:F:2437:ASP:OD1	1:F:2472:GLN:NE2	2.30	0.65
1:F:3828:TYR:CE1	1:F:3879:PRO:HD3	2.31	0.65
1:F:3994:ASP:HB3	1:F:3998:LEU:HG	1.77	0.65
4:Q:57:ARG:HD2	4:Q:121:PHE:HA	1.79	0.65
10:I:28:DT:H2''	10:I:29:DA:C4	2.31	0.65
11:J:31:DT:H1'	11:J:32:DT:H5'	1.79	0.65
1:A:759:GLY:HA3	1:A:766:ALA:HB2	1.79	0.65
1:A:902:LYS:HE3	1:F:2570:PRO:HG2	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:98:GLN:HE21	1:F:101:ALA:HB2	1.61	0.65
1:F:326:MET:O	1:F:330:ASN:ND2	2.29	0.65
1:F:3348:LEU:O	1:F:3352:GLU:N	2.30	0.65
1:F:3581:PRO:HA	1:F:3584:LEU:HD13	1.77	0.65
2:L:178:LYS:HG3	3:M:792:MET:HE3	1.78	0.65
3:M:812:MET:HG3	3:M:903:LEU:HA	1.77	0.65
1:A:1630:ASP:HA	1:A:1633:TRP:HE1	1.62	0.65
1:A:1878:ASP:OD1	1:A:1879:VAL:N	2.30	0.65
1:A:2967:GLU:OE1	1:A:2967:GLU:N	2.30	0.65
1:F:2218:PHE:O	1:F:2222:HIS:ND1	2.30	0.65
1:F:3628:PHE:HA	1:F:3631:LYS:HE3	1.78	0.65
1:A:4114:PRO:HA	1:A:4117:LEU:HD12	1.79	0.65
1:F:3720:ALA:HB3	1:F:3743:HIS:HB3	1.79	0.65
3:P:820:LEU:HD21	3:P:841:LYS:HD2	1.77	0.65
9:E:39:DA:N6	9:E:40:DT:O4	2.29	0.65
1:A:31:GLY:HA2	1:A:34:LEU:HD12	1.78	0.65
1:A:1603:GLN:HA	1:A:1606:ARG:HE	1.62	0.65
1:F:2894:GLU:HG3	1:F:3973:PRO:HG3	1.78	0.65
2:K:19:PHE:CZ	2:L:127:ILE:HG23	2.32	0.65
1:A:87:LYS:NZ	1:A:829:VAL:O	2.30	0.65
1:A:1307:ILE:HG23	1:A:1309:ALA:H	1.60	0.65
1:A:1848:ILE:HG12	1:A:1915:LEU:HD21	1.78	0.65
1:A:2252:PRO:O	1:A:2291:GLN:NE2	2.30	0.65
1:A:2271:SER:O	1:A:2275:GLN:NE2	2.22	0.65
1:A:3948:SER:O	1:A:3952:PHE:N	2.30	0.65
1:F:2430:GLU:OE1	1:F:2430:GLU:N	2.19	0.65
1:F:3085:GLU:HA	1:F:3088:LEU:HD12	1.79	0.65
2:K:158:VAL:HG12	3:M:840:ILE:HG13	1.79	0.65
1:F:2569:SER:HB2	1:F:2572:TYR:HB2	1.79	0.64
2:L:51:GLU:O	2:L:54:GLN:NE2	2.31	0.64
3:P:814:ARG:N	3:P:850:ALA:O	2.30	0.64
4:Q:5:GLU:OE2	4:Q:48:GLN:NE2	2.29	0.64
1:A:79:ARG:HE	1:A:82:ARG:HE	1.43	0.64
1:A:724:GLU:HB3	1:A:2600:THR:H	1.62	0.64
1:A:785:MET:HA	1:A:788:TYR:CZ	2.32	0.64
1:A:935:HIS:HD2	1:A:2773:ARG:HH12	1.42	0.64
1:F:1815:THR:N	1:F:1818:SER:HG	1.95	0.64
1:F:3385:LEU:HB3	1:F:3416:LEU:HD12	1.79	0.64
2:K:99:LYS:HB3	2:K:108:LEU:HD22	1.80	0.64
2:O:36:LEU:HB2	2:O:43:TRP:HB2	1.79	0.64
1:A:2120:ARG:HH21	1:A:2159:PRO:HG2	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:643:GLU:HA	1:F:646:VAL:HG13	1.78	0.64
1:F:1254:LEU:HA	1:F:1257:LEU:HD12	1.80	0.64
1:F:2576:MET:SD	1:F:2576:MET:N	2.70	0.64
1:F:2937:ASP:HB3	1:F:3979:LEU:HA	1.79	0.64
1:A:2851:PHE:HB3	1:A:2854:PHE:HB3	1.78	0.64
1:F:2570:PRO:O	1:F:2574:ASN:ND2	2.30	0.64
1:F:3512:VAL:HA	1:F:3515:GLN:NE2	2.11	0.64
2:N:152:LEU:HB2	2:O:151:LEU:HD13	1.80	0.64
1:F:2376:ASP:HA	1:F:2379:MET:HG2	1.79	0.64
1:F:2866:ALA:HA	1:F:2869:LEU:HG	1.79	0.64
1:A:1448:LEU:HD23	1:A:1510:LEU:HD22	1.78	0.64
1:A:2825:THR:HG23	1:A:2828:GLU:H	1.61	0.64
1:A:3459:ASN:HA	1:A:3462:ARG:HD3	1.79	0.64
1:F:67:VAL:HA	1:F:71:LYS:HG2	1.79	0.64
1:F:3680:LEU:HD11	1:F:3688:SER:HA	1.80	0.64
2:O:43:TRP:HB3	2:O:115:LYS:HA	1.79	0.64
8:D:18:DA:H2"	8:D:19:DA:C8	2.32	0.64
1:A:217:LEU:N	1:A:218:PRO:HD2	2.13	0.64
1:A:997:ASN:HB3	1:A:1000:LYS:HG2	1.79	0.64
1:F:2824:LYS:O	1:F:2829:LYS:NZ	2.30	0.64
4:R:27:VAL:HG12	4:R:82:PRO:HA	1.80	0.64
4:R:36:LEU:HD13	4:R:106:LEU:HD22	1.80	0.64
1:A:1171:TRP:O	1:A:1175:HIS:ND1	2.30	0.64
1:A:2353:GLN:HB3	1:A:2360:PHE:HB2	1.80	0.64
1:A:3255:ALA:HB1	1:A:3258:LEU:HB3	1.80	0.64
1:F:584:GLU:N	1:F:613:HIS:O	2.31	0.64
1:F:3007:GLU:O	1:F:3011:LEU:HG	1.98	0.64
1:F:3787:GLN:NE2	1:F:3788:LEU:O	2.31	0.64
3:M:862:HIS:HA	3:M:886:PHE:HB2	1.80	0.64
2:O:37:THR:HA	2:O:42:ALA:HA	1.80	0.64
1:A:2257:PHE:HA	1:A:2260:PHE:CE2	2.33	0.64
1:A:3110:PHE:CE1	1:A:3128:LYS:HG3	2.32	0.64
1:F:380:ASP:O	1:F:383:PHE:HB3	1.96	0.64
1:F:2263:LYS:HE3	1:F:2265:PRO:HA	1.78	0.64
11:J:17:DT:H2"	11:J:18:DA:C8	2.32	0.64
1:A:1322:THR:O	1:A:1326:GLU:N	2.31	0.64
1:A:1339:VAL:O	1:A:1343:GLU:HG2	1.97	0.64
1:A:1727:ARG:HH22	1:A:1731:PRO:HD3	1.62	0.64
1:A:3097:ASP:OD1	1:A:3098:ARG:N	2.31	0.64
1:F:3383:GLN:O	1:F:3387:GLU:HG3	1.97	0.64
3:M:746:MET:O	3:M:751:LYS:NZ	2.29	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:Q:58:ALA:HB1	4:Q:67:ALA:HB3	1.79	0.64
1:A:736:LEU:HD12	1:A:740:ILE:HG21	1.80	0.63
1:A:2295:GLN:HG3	1:A:2298:GLU:HB3	1.80	0.63
1:A:225:LYS:NZ	1:A:267:VAL:O	2.30	0.63
1:A:1298:LEU:HG	1:A:1367:HIS:CE1	2.34	0.63
1:F:18:THR:O	1:F:22:ALA:N	2.28	0.63
1:F:584:GLU:HB2	1:F:613:HIS:HB3	1.79	0.63
1:F:1960:LYS:HD3	1:F:2125:TRP:HE1	1.63	0.63
1:F:3878:VAL:HG13	1:F:3965:ARG:HH11	1.63	0.63
2:K:34:ILE:O	2:K:45:GLY:N	2.31	0.63
2:N:59:MET:HG2	2:N:101:LEU:HB3	1.78	0.63
2:N:72:LYS:HD2	2:N:80:PRO:HD2	1.78	0.63
3:P:739:GLN:H	3:P:742:PHE:HE1	1.46	0.63
4:R:131:VAL:HA	4:R:135:LEU:HD13	1.79	0.63
1:A:1095:LEU:O	1:A:1099:PHE:N	2.30	0.63
1:F:332:GLU:HB2	1:F:335:LYS:HD2	1.79	0.63
1:F:382:ASP:O	1:F:385:TYR:HB3	1.99	0.63
1:F:1234:GLY:HA3	1:F:1292:LYS:NZ	2.13	0.63
1:F:2810:SER:HA	1:F:2861:ILE:HD11	1.80	0.63
1:F:3423:GLN:O	1:F:3427:GLU:N	2.30	0.63
2:N:194:LEU:HB3	2:O:194:LEU:HB3	1.80	0.63
3:P:814:ARG:HB2	3:P:847:PHE:N	2.14	0.63
1:F:3626:GLY:HA2	1:F:3677:PRO:HB3	1.80	0.63
3:M:827:ASN:HA	3:M:855:CYS:HA	1.81	0.63
2:N:151:LEU:HD22	2:O:152:LEU:HA	1.79	0.63
4:Q:158:HIS:CD2	4:Q:186:GLU:HG3	2.34	0.63
8:D:16:DA:H1'	9:E:42:DA:H61	1.62	0.63
1:A:585:ILE:O	1:A:611:ASN:ND2	2.31	0.63
1:A:1389:VAL:HG23	1:A:1391:VAL:HG22	1.80	0.63
1:A:3190:LEU:HD13	1:A:3231:ILE:HB	1.81	0.63
1:F:1448:LEU:HD11	1:F:1514:LEU:HD21	1.79	0.63
1:A:169:THR:HA	1:A:172:GLU:HG2	1.80	0.63
1:A:469:ALA:HA	1:A:475:LEU:HD22	1.81	0.63
1:F:1184:ARG:NH2	1:F:1265:GLU:OE1	2.31	0.63
1:F:1322:THR:O	1:F:1326:GLU:N	2.31	0.63
1:F:1512:SER:HA	1:F:1515:LEU:HD12	1.81	0.63
1:F:1711:ARG:O	1:F:1715:GLU:HG2	1.98	0.63
1:F:1936:ARG:HD3	1:F:1939:LEU:HD12	1.81	0.63
2:K:197:LYS:HE3	2:L:198:LEU:HD21	1.80	0.63
3:P:746:MET:HB2	3:P:750:THR:HB	1.81	0.63
1:A:1115:HIS:CE1	1:A:1183:CYS:H	2.17	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2415:LEU:HB2	1:F:2420:PHE:HB2	1.81	0.63
1:F:3962:ARG:HA	1:F:4124:TRP:HZ2	1.63	0.63
3:M:761:TYR:HB2	3:M:777:VAL:HG13	1.81	0.63
1:F:1115:HIS:CE1	1:F:1183:CYS:H	2.14	0.63
2:K:3:ARG:HH12	2:K:35:THR:HG21	1.64	0.63
3:M:871:ARG:O	3:M:875:PHE:N	2.29	0.63
1:A:1251:GLN:HA	1:A:1254:LEU:HD12	1.81	0.63
1:A:1788:ARG:O	1:A:1794:GLN:NE2	2.32	0.63
1:A:2227:LYS:HB2	1:A:2230:VAL:HG22	1.80	0.63
1:A:3657:SER:N	1:A:3660:ASN:OD1	2.31	0.63
1:A:4050:LYS:HD3	1:A:4059:ILE:HG21	1.79	0.63
1:F:1771:GLN:HG3	1:F:1775:GLU:H	1.64	0.63
1:F:3757:ASP:OD1	1:F:3759:ARG:N	2.31	0.63
2:L:95:PHE:HB3	2:L:111:PHE:HB2	1.80	0.63
3:P:813:PHE:HB2	3:P:848:HIS:CD2	2.34	0.63
10:I:44:DG:H2'	10:I:45:DG:H2'	1.81	0.63
1:A:2723:THR:HA	1:A:2726:LEU:HD13	1.80	0.62
1:A:2943:PHE:O	1:A:2954:GLN:NE2	2.32	0.62
1:F:1060:PHE:HA	1:F:1063:LEU:HD12	1.81	0.62
1:F:1747:LEU:HD22	1:F:1777:LEU:HB3	1.81	0.62
2:L:175:ASP:HA	2:L:178:LYS:HD2	1.80	0.62
8:D:18:DA:H2'	8:D:18:DA:N3	2.13	0.62
1:A:3142:ILE:HA	1:A:3145:ILE:HG12	1.81	0.62
1:A:3158:LYS:NZ	1:A:3162:ASN:HB3	2.14	0.62
1:F:908:ASP:HA	1:F:911:LEU:HD13	1.82	0.62
3:P:707:ILE:HA	3:P:710:LYS:HE2	1.80	0.62
1:A:25:CYS:SG	1:A:26:GLY:N	2.72	0.62
1:A:1751:GLU:O	1:A:1788:ARG:NH1	2.33	0.62
1:A:2940:ARG:HH22	1:A:3982:SER:HB3	1.64	0.62
1:F:2578:GLU:OE1	1:F:2578:GLU:N	2.29	0.62
10:I:24:DA:H5''	10:I:25:DA:C5	2.34	0.62
1:F:880:MET:O	1:F:881:LYS:HG2	1.99	0.62
1:F:1101:PHE:HA	1:F:1104:LEU:HD12	1.81	0.62
1:F:3940:ILE:HG22	1:F:3941:ASP:H	1.64	0.62
3:P:813:PHE:N	3:P:850:ALA:H	1.97	0.62
1:A:2746:LYS:HD2	8:D:14:DA:C5	2.35	0.62
1:A:3094:ASP:OD1	1:A:3192:LYS:NZ	2.32	0.62
1:F:1019:ASP:O	1:F:1026:ARG:NH2	2.32	0.62
1:F:1184:ARG:NH2	1:F:1262:ALA:HA	2.13	0.62
1:F:3738:ILE:HD11	1:F:3750:PHE:HB2	1.81	0.62
2:O:45:GLY:HA3	2:O:114:GLU:HG2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:Q:40:ASP:OD1	4:Q:43:GLN:N	2.32	0.62
9:E:33:DA:N3	9:E:34:DC:N4	2.48	0.62
1:A:3735:PRO:HB2	1:A:3751:LEU:HD11	1.80	0.62
1:F:3187:CYS:HA	1:F:3190:LEU:HD12	1.81	0.62
2:N:54:GLN:HB2	4:Q:65:LEU:HB2	1.81	0.62
3:P:660:GLU:HG2	3:P:686:GLY:HA3	1.81	0.62
1:A:1795:VAL:HG21	1:A:1838:GLU:HB2	1.80	0.62
1:A:3701:ILE:HD12	1:A:3717:VAL:HG13	1.81	0.62
1:F:3860:LYS:HB2	1:F:4073:ALA:HB2	1.81	0.62
3:P:889:LEU:HA	3:P:905:GLU:HB2	1.79	0.62
8:D:23:DT:H72	9:E:33:DA:N6	2.15	0.62
1:A:3963:LEU:HD23	1:A:4112:THR:HG21	1.80	0.62
1:F:1039:TRP:NE1	1:F:1043:GLN:OE1	2.33	0.62
1:F:1300:SER:HA	1:F:1304:HIS:HB3	1.82	0.62
1:F:3625:LEU:HD23	1:F:3682:GLU:HB3	1.82	0.62
4:Q:8:LEU:HG	4:Q:26:LYS:HB3	1.82	0.62
1:A:124:LYS:HG2	1:A:125:ILE:H	1.64	0.62
1:A:3034:PRO:HB2	1:A:3037:GLN:HG2	1.81	0.62
10:I:37:DT:H2'	10:I:38:DT:H71	1.81	0.62
1:A:38:LEU:HD21	1:A:85:ILE:HG13	1.82	0.62
1:A:1021:VAL:O	1:A:1026:ARG:NH1	2.33	0.62
1:A:2120:ARG:HH22	1:A:2157:PHE:HA	1.65	0.62
1:A:2205:VAL:HG22	1:A:2207:LYS:H	1.65	0.62
1:A:2745:ARG:HH21	9:E:45:DG:H2'	1.65	0.62
1:A:3354:ASP:H	1:A:3357:ARG:HG2	1.65	0.62
1:F:628:GLU:OE1	1:F:631:ARG:NH2	2.27	0.62
1:F:1358:LEU:HA	1:F:1361:LYS:HE2	1.81	0.62
1:F:3444:ALA:HA	1:F:3482:LEU:HD11	1.81	0.62
4:Q:22:SER:HB2	4:Q:208:LYS:HD2	1.81	0.62
1:A:2976:LEU:O	1:A:2979:GLN:NE2	2.33	0.61
1:A:3781:CYS:O	1:A:3785:ALA:N	2.32	0.61
1:F:2133:LEU:HD11	1:F:2171:LEU:HD22	1.81	0.61
1:F:3262:LEU:O	1:F:3266:SER:N	2.33	0.61
2:K:179:ARG:HB3	3:M:805:TRP:CZ2	2.35	0.61
4:R:138:PRO:O	4:R:142:MET:HB3	2.00	0.61
8:D:16:DA:H1'	9:E:42:DA:N6	2.14	0.61
1:A:879:MET:HG3	1:A:881:LYS:H	1.65	0.61
1:A:3547:THR:HG23	1:A:3550:LYS:HD2	1.80	0.61
1:A:3733:ARG:NH2	1:A:3755:GLY:H	1.98	0.61
1:F:1385:ASN:ND2	1:F:1388:ASP:OD1	2.33	0.61
1:F:2308:SER:HB3	1:F:2348:GLN:HE22	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2573:PRO:HA	1:F:2786:LYS:HD3	1.81	0.61
1:F:2723:THR:HA	1:F:2726:LEU:HD13	1.82	0.61
1:F:2920:VAL:HA	1:F:2923:TRP:HB2	1.82	0.61
1:F:3496:ILE:HG21	1:F:3705:TYR:HB3	1.82	0.61
1:F:3928:PHE:CE1	1:F:3962:ARG:HG3	2.35	0.61
1:A:334:HIS:HA	1:A:337:LYS:HE3	1.81	0.61
1:F:3313:SER:HB2	1:F:3323:PHE:HB2	1.81	0.61
3:M:896:ASP:HB3	3:M:900:LYS:HD3	1.82	0.61
4:R:34:TYR:OH	4:R:57:ARG:NH2	2.33	0.61
1:A:1420:ARG:NH2	1:A:1465:HIS:O	2.33	0.61
1:A:2278:GLY:O	1:A:2282:ALA:N	2.33	0.61
1:A:3183:ILE:HD12	1:A:3238:MET:HB2	1.82	0.61
3:P:813:PHE:O	3:P:847:PHE:N	2.33	0.61
3:P:865:ILE:H	3:P:889:LEU:HD11	1.65	0.61
10:I:27:DC:H2''	11:J:31:DT:C5	2.34	0.61
1:A:2920:VAL:HA	1:A:2923:TRP:HB2	1.81	0.61
1:A:3072:GLU:HA	1:A:3075:LYS:HE2	1.81	0.61
1:F:1397:ASP:OD1	1:F:1398:VAL:N	2.33	0.61
1:F:1441:ALA:O	1:F:1445:ARG:NH1	2.33	0.61
1:F:1514:LEU:HA	1:F:1517:LEU:HD12	1.82	0.61
1:F:2737:GLU:HB2	1:F:2740:SER:HB2	1.82	0.61
3:P:839:ALA:O	3:P:843:LEU:HG	1.99	0.61
1:A:1484:LEU:HD11	1:A:1531:LEU:HD13	1.83	0.61
1:A:2938:VAL:O	1:A:2942:ILE:HG12	2.01	0.61
1:F:3771:MET:HA	1:F:3774:ILE:HD12	1.83	0.61
4:Q:61:LEU:HD22	4:Q:118:TYR:O	2.00	0.61
11:J:21:DA:H2'	11:J:22:DG:C8	2.36	0.61
1:A:124:LYS:HD2	8:D:22:DG:H21	1.65	0.61
1:F:759:GLY:HA3	1:F:766:ALA:HB2	1.81	0.61
1:F:1268:ASN:ND2	1:F:1344:PHE:HA	2.10	0.61
1:F:1440:ASP:OD1	1:F:1445:ARG:NH1	2.33	0.61
1:F:2988:GLU:HA	1:F:2991:LYS:HE2	1.82	0.61
1:F:3617:LEU:HD23	1:F:3633:ILE:HG22	1.83	0.61
2:K:181:ILE:HG13	3:M:774:LEU:HD22	1.82	0.61
8:D:37:DG:OP1	9:E:21:DA:N6	2.34	0.61
1:A:723:ASP:C	1:A:725:LEU:H	2.03	0.61
1:A:2410:GLU:O	1:A:2414:GLN:NE2	2.31	0.61
1:A:3731:SER:HB2	1:A:3735:PRO:HD3	1.83	0.61
1:F:16:GLN:NE2	1:F:62:ASP:OD2	2.30	0.61
1:F:531:PHE:HA	1:F:534:LEU:HD12	1.81	0.61
1:F:665:GLY:O	1:F:669:LEU:HG	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1818:SER:HB2	1:F:1822:ARG:HH21	1.66	0.61
1:F:3247:ARG:HH22	1:F:3248:LYS:HG3	1.65	0.61
1:F:3479:THR:HA	1:F:3482:LEU:HD12	1.82	0.61
1:A:61:ARG:HB2	1:A:103:TYR:HE2	1.64	0.61
1:A:2967:GLU:O	1:A:2971:GLN:HG2	2.01	0.61
1:F:397:LEU:HD23	1:F:399:GLN:HE22	1.66	0.61
1:F:1082:PHE:HA	1:F:1085:ILE:HG12	1.81	0.61
1:F:2295:GLN:NE2	1:F:2298:GLU:OE1	2.34	0.61
1:F:2346:ALA:HB2	1:F:2377:ARG:HH11	1.65	0.61
3:M:710:LYS:HA	3:M:713:ILE:HD12	1.82	0.61
3:M:857:ALA:HB3	3:M:860:VAL:HG23	1.81	0.61
4:Q:7:GLY:O	4:Q:11:GLN:N	2.34	0.61
1:F:1151:ARG:NH1	1:F:1163:LEU:O	2.30	0.61
1:F:1180:GLN:HB3	1:F:1183:CYS:HB3	1.82	0.61
2:K:40:HIS:NE2	2:L:40:HIS:O	2.34	0.61
2:N:179:ARG:NH2	3:P:807:CYS:SG	2.74	0.60
3:P:844:GLU:OE2	3:P:848:HIS:NE2	2.25	0.60
4:Q:14:ALA:HB1	4:Q:84:LEU:HD22	1.83	0.60
1:F:111:CYS:O	1:F:130:LEU:HD11	2.01	0.60
3:M:728:GLU:HG2	3:M:736:VAL:HG21	1.83	0.60
2:O:25:GLU:HG2	2:O:26:LYS:H	1.66	0.60
1:A:1018:VAL:HG22	1:A:1074:LYS:HA	1.83	0.60
1:A:2132:LYS:O	1:A:2135:ASN:ND2	2.33	0.60
1:A:3263:HIS:HB2	1:A:3276:TRP:CZ2	2.37	0.60
1:F:1095:LEU:O	1:F:1099:PHE:N	2.34	0.60
1:F:1372:LEU:O	1:F:1376:LEU:N	2.27	0.60
1:F:2149:LEU:O	1:F:2153:THR:HG23	2.01	0.60
1:F:2920:VAL:HG12	1:F:2947:ILE:HG23	1.83	0.60
1:F:3228:SER:OG	1:F:3232:ARG:NH2	2.27	0.60
1:F:3810:VAL:HG21	1:F:3815:LEU:HD13	1.84	0.60
2:K:47:VAL:HG13	2:K:51:GLU:HB2	1.83	0.60
3:P:845:LEU:HB3	3:P:852:VAL:HG22	1.84	0.60
4:R:46:HIS:CE1	4:R:48:GLN:HB2	2.36	0.60
1:A:1369:MET:HE3	1:A:1415:LEU:HA	1.83	0.60
1:F:3483:MET:HE3	1:F:3513:ALA:H	1.64	0.60
1:A:2218:PHE:O	1:A:2222:HIS:ND1	2.34	0.60
1:F:1423:ILE:HG13	1:F:1425:ALA:H	1.65	0.60
1:F:2586:PHE:HD1	1:F:2778:GLY:HA3	1.67	0.60
2:K:88:PHE:HA	2:K:95:PHE:HA	1.83	0.60
2:O:50:SER:H	2:O:54:GLN:NE2	1.98	0.60
1:A:843:ASN:O	1:A:2764:LYS:NZ	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1742:CYS:O	1:A:1746:PHE:HD1	1.85	0.60
1:A:2097:LEU:HB2	1:A:2149:LEU:HD11	1.83	0.60
1:A:2430:GLU:OE1	1:A:2430:GLU:N	2.33	0.60
1:A:2937:ASP:HB2	1:A:3979:LEU:HD23	1.84	0.60
1:A:3986:HIS:HA	1:A:3989:ARG:HH21	1.65	0.60
1:F:3725:ARG:HB3	1:F:3739:ILE:HD12	1.82	0.60
2:K:22:VAL:HG12	2:K:24:TRP:HB3	1.83	0.60
3:M:654:LYS:N	3:M:660:GLU:OE2	2.35	0.60
3:M:758:TYR:HA	3:M:764:SER:HA	1.84	0.60
3:M:800:GLU:HB3	3:M:806:ASP:HB2	1.84	0.60
3:M:864:ILE:HG21	3:M:894:VAL:HB	1.82	0.60
4:Q:21:ASN:HB2	4:Q:99:CYS:HA	1.84	0.60
1:A:1445:ARG:NH1	1:A:1507:CYS:SG	2.75	0.60
1:A:2205:VAL:HG13	1:A:2208:ASP:H	1.65	0.60
1:F:196:LEU:HB3	1:F:200:PHE:CZ	2.37	0.60
4:R:17:GLN:HB2	4:R:84:LEU:HB3	1.83	0.60
8:D:18:DA:H2''	8:D:19:DA:C5	2.36	0.60
1:A:247:GLU:HG2	1:A:251:PHE:CZ	2.36	0.60
1:A:652:GLU:O	1:A:656:GLN:NE2	2.27	0.60
1:A:1665:HIS:H	1:A:1668:PHE:HB3	1.66	0.60
1:F:3945:ALA:N	1:F:3948:SER:OG	2.33	0.60
2:L:179:ARG:HD3	3:M:778:PHE:HB3	1.82	0.60
3:P:857:ALA:O	3:P:884:ARG:NH1	2.30	0.60
4:R:15:TRP:H	4:R:211:VAL:HG11	1.66	0.60
3:M:829:LEU:HD13	3:M:854:SER:HB3	1.84	0.60
2:N:188:LYS:HG3	2:O:187:LYS:HZ1	1.67	0.60
4:Q:108:VAL:HG11	4:Q:119:TRP:HB2	1.82	0.60
4:Q:209:PRO:O	4:Q:213:ASN:HB2	2.01	0.60
1:A:196:LEU:HB3	1:A:200:PHE:CZ	2.37	0.60
1:A:2587:GLN:O	1:A:2777:HIS:N	2.35	0.60
1:A:2833:THR:HG21	1:A:2867:ALA:HB1	1.82	0.60
1:A:3072:GLU:O	1:A:3076:ALA:N	2.23	0.60
1:A:3574:ALA:HB1	1:A:3684:SER:HA	1.83	0.60
1:F:1151:ARG:HB2	1:F:1163:LEU:HD12	1.84	0.60
1:F:3094:ASP:OD1	1:F:3192:LYS:NZ	2.30	0.60
1:F:3193:ILE:HD13	1:F:3196:LYS:HE3	1.83	0.60
2:K:7:ARG:NH2	2:L:131:LEU:O	2.34	0.60
3:M:853:VAL:HG22	3:M:855:CYS:H	1.66	0.60
8:D:26:DT:H2''	8:D:27:DT:C5	2.37	0.60
1:A:3443:PRO:HB3	1:A:3471:ILE:HD11	1.83	0.59
1:A:3970:LEU:HG	1:A:3971:MET:SD	2.41	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:188:GLU:OE2	1:F:192:ASN:ND2	2.35	0.59
1:F:3577:GLN:HA	1:F:3629:ARG:HE	1.66	0.59
4:R:46:HIS:HE1	4:R:48:GLN:HB2	1.65	0.59
9:E:44:DG:O3'	9:E:45:DG:N2	2.34	0.59
10:I:43:DT:H2'	10:I:44:DG:C2	2.36	0.59
1:A:1766:LEU:HD13	1:A:1778:PHE:CG	2.36	0.59
1:F:1392:MET:HA	1:F:1395:LEU:HG	1.84	0.59
1:F:1639:LEU:HA	1:F:1642:LYS:HE2	1.85	0.59
1:F:1795:VAL:HG23	1:F:1835:ALA:HB1	1.83	0.59
1:F:3778:ASP:OD1	1:F:3779:SER:N	2.35	0.59
3:M:697:THR:HB	3:M:718:HIS:CE1	2.37	0.59
3:M:800:GLU:HG2	3:M:805:TRP:HB2	1.84	0.59
2:O:21:GLN:HE22	2:O:129:TYR:HB2	1.67	0.59
4:R:48:GLN:HG2	4:R:130:LEU:HD12	1.83	0.59
1:A:1071:ASN:ND2	1:A:1074:LYS:HG3	2.16	0.59
1:A:1357:LYS:O	1:A:1361:LYS:N	2.30	0.59
1:A:2209:GLU:HA	1:A:2248:CYS:HB2	1.83	0.59
1:A:2306:ASN:HA	1:A:2309:PHE:CD2	2.37	0.59
1:F:2254:ARG:HH21	1:F:2291:GLN:HE22	1.48	0.59
1:A:145:ASP:O	1:A:148:LYS:NZ	2.30	0.59
1:A:1149:LYS:N	1:A:1163:LEU:O	2.35	0.59
1:A:3958:LEU:HD22	1:A:4115:ASN:HB3	1.84	0.59
1:F:131:LEU:HB3	1:F:177:LEU:HD21	1.83	0.59
1:F:2235:LEU:HA	1:F:2238:ILE:HD12	1.83	0.59
1:F:2806:LYS:NZ	1:F:2807:GLN:OE1	2.24	0.59
3:M:818:VAL:N	3:M:851:LYS:O	2.36	0.59
1:A:305:ASN:O	1:A:308:LEU:N	2.31	0.59
1:A:913:ARG:NH2	1:A:2801:ASP:OD1	2.34	0.59
1:A:1363:LEU:HD11	1:A:1368:LEU:HD13	1.84	0.59
1:F:2518:GLN:HG3	1:F:2522:ARG:HH12	1.68	0.59
1:F:2776:ARG:HH22	1:F:2784:GLN:HB2	1.68	0.59
1:F:3118:ASP:OD1	1:F:3119:VAL:N	2.34	0.59
1:F:3945:ALA:H	1:F:3948:SER:HG	1.50	0.59
8:D:26:DT:H2''	8:D:27:DT:C6	2.37	0.59
1:A:708:VAL:HG22	1:A:740:ILE:HG13	1.83	0.59
1:A:1407:LYS:O	1:A:1412:LYS:HD2	2.03	0.59
1:A:3588:TRP:NE1	1:A:3609:MET:SD	2.74	0.59
1:F:135:LEU:O	1:F:139:ARG:HD3	2.02	0.59
1:F:164:LYS:HB3	1:F:166:ILE:HG12	1.83	0.59
1:F:1111:LEU:HB3	1:F:1183:CYS:HB2	1.84	0.59
1:F:2104:MET:O	1:F:2108:LEU:N	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3581:PRO:HB2	1:F:3617:LEU:HD21	1.83	0.59
2:N:181:ILE:HG13	3:P:774:LEU:HD22	1.83	0.59
1:A:1062:ARG:NH1	1:A:3745:GLU:HB2	2.18	0.59
1:A:1067:ALA:HB1	1:A:1110:SER:HB3	1.85	0.59
1:A:2891:ARG:HB2	1:A:3898:LEU:HD21	1.85	0.59
1:A:3112:GLN:NE2	1:A:3113:ASN:OD1	2.36	0.59
1:F:3820:MET:SD	1:F:3825:LYS:HB2	2.43	0.59
1:F:3856:MET:HA	1:F:3859:TYR:CD2	2.38	0.59
4:R:18:LEU:HG	4:R:104:LEU:HD11	1.85	0.59
1:A:1261:LEU:HD11	1:A:1337:VAL:HG22	1.83	0.59
1:A:1603:GLN:HE21	1:A:1607:GLU:HB2	1.68	0.59
1:A:2324:GLY:HA3	1:A:2370:SER:OG	2.03	0.59
1:A:2930:TYR:HB2	1:A:2939:LEU:HD21	1.84	0.59
1:A:2973:ASP:O	1:A:2977:ASN:ND2	2.36	0.59
1:A:3173:MET:O	1:A:3249:GLN:NE2	2.36	0.59
1:A:3730:ALA:HA	1:A:3734:ARG:HG3	1.84	0.59
1:F:1115:HIS:HA	1:F:1119:LYS:HE3	1.85	0.59
1:F:3585:PHE:HB3	1:F:3586:LYS:HZ2	1.68	0.59
1:F:3681:LYS:O	1:F:3688:SER:OG	2.20	0.59
2:K:89:SER:HB3	2:K:96:PHE:HE1	1.67	0.59
2:L:22:VAL:HG22	2:L:34:ILE:HA	1.84	0.59
2:N:180:PHE:HE2	2:O:176:LEU:HB3	1.67	0.59
1:A:472:GLY:O	1:A:476:ARG:NE	2.32	0.59
1:A:1109:GLU:O	1:A:1113:LEU:HG	2.03	0.59
1:A:2254:ARG:HH22	1:A:2292:CYS:HB3	1.68	0.59
1:A:2411:LEU:HD21	1:A:2442:MET:HG3	1.85	0.59
1:A:3728:VAL:HG22	1:A:3736:LYS:HG3	1.84	0.59
1:F:82:ARG:HA	1:F:85:ILE:HD12	1.83	0.59
1:F:2312:TYR:OH	11:J:17:DT:OP1	2.20	0.59
1:F:3728:VAL:HG22	1:F:3736:LYS:HG3	1.85	0.59
2:L:138:GLN:HA	2:L:141:ASN:HD22	1.68	0.59
1:A:1759:LEU:HD22	1:A:1797:LEU:HD23	1.85	0.59
1:F:2468:THR:O	1:F:2471:GLU:HG2	2.03	0.59
1:F:2526:SER:O	1:F:2538:ARG:NH2	2.30	0.59
1:F:3502:MET:HA	1:F:3505:LEU:HB3	1.85	0.59
4:Q:68:PRO:O	4:Q:72:PHE:N	2.32	0.59
4:Q:131:VAL:HG12	4:R:44:VAL:CG2	2.30	0.59
4:R:65:LEU:HD21	4:R:119:TRP:HE3	1.68	0.59
1:A:2532:PRO:HD2	1:A:2538:ARG:HA	1.84	0.58
1:A:2555:LEU:HD11	1:A:2854:PHE:HA	1.85	0.58
1:A:2860:ASP:O	1:A:2864:GLN:HG2	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:89:LEU:O	1:F:133:LYS:NZ	2.36	0.58
1:F:1278:ALA:O	1:F:1282:LEU:N	2.34	0.58
1:F:1871:MET:HE2	1:F:1871:MET:HA	1.85	0.58
3:M:868:ASP:OD2	3:M:871:ARG:NH2	2.36	0.58
1:F:409:GLN:OE1	1:F:409:GLN:N	2.35	0.58
1:F:645:TRP:O	1:F:649:PHE:HB3	2.02	0.58
1:F:1815:THR:O	1:F:1818:SER:OG	2.22	0.58
2:N:10:LEU:HG	2:N:17:THR:HA	1.85	0.58
2:N:157:ASP:OD2	3:P:837:ARG:NH1	2.35	0.58
4:R:62:ASN:HD21	4:R:120:ASN:H	1.50	0.58
10:I:31:DA:OP2	10:I:32:DA:N6	2.36	0.58
1:A:1047:GLN:O	1:A:1050:GLU:HG2	2.03	0.58
1:A:3118:ASP:OD1	1:A:3119:VAL:N	2.36	0.58
1:F:1803:GLU:HA	1:F:1806:ARG:HH21	1.68	0.58
1:F:1948:ALA:O	1:F:1952:ILE:HG12	2.03	0.58
2:N:155:TRP:HE1	2:O:158:VAL:HG21	1.68	0.58
10:I:40:DT:H2''	10:I:41:DT:O4'	2.03	0.58
1:A:337:LYS:HB2	1:A:369:PHE:HE1	1.69	0.58
1:A:468:LEU:HG	1:A:475:LEU:HA	1.86	0.58
1:A:527:TYR:HB3	1:A:531:PHE:HE1	1.69	0.58
1:F:895:ALA:HB1	1:F:902:LYS:HB3	1.85	0.58
2:L:17:THR:OG1	2:L:38:ASP:O	2.21	0.58
3:P:843:LEU:HA	3:P:846:ARG:HE	1.69	0.58
1:A:95:LYS:HE2	1:A:95:LYS:HA	1.86	0.58
1:A:1643:MET:HA	1:A:1646:LEU:HD12	1.84	0.58
1:A:2414:GLN:OE1	1:A:2414:GLN:N	2.34	0.58
1:A:3963:LEU:HA	1:A:3967:PHE:HD2	1.68	0.58
1:F:1878:ASP:OD1	1:F:1879:VAL:N	2.36	0.58
1:F:3666:LEU:HA	1:F:3669:LYS:HZ1	1.67	0.58
3:P:663:GLU:HB3	3:P:697:THR:HA	1.86	0.58
1:A:663:ILE:HG22	1:A:666:PHE:H	1.68	0.58
1:A:718:MET:SD	1:A:719:LYS:HD3	2.44	0.58
1:A:771:ASN:HA	1:A:774:GLU:OE1	2.02	0.58
1:A:2559:THR:O	1:A:2563:LEU:HG	2.04	0.58
1:F:61:ARG:HB2	1:F:103:TYR:HE2	1.68	0.58
1:F:1779:GLN:O	1:F:1783:ARG:HG2	2.04	0.58
1:F:2353:GLN:HB3	1:F:2360:PHE:HB2	1.84	0.58
1:F:3428:GLU:HB3	1:F:3474:ARG:HH22	1.69	0.58
2:L:139:ALA:O	2:L:143:HIS:ND1	2.27	0.58
2:N:121:GLU:HA	2:N:124:ARG:HD2	1.85	0.58
1:A:320:LEU:HD21	1:A:365:GLY:HA2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:409:GLN:N	1:A:409:GLN:OE1	2.37	0.58
1:A:1867:ILE:O	1:A:1871:MET:HG2	2.03	0.58
1:A:3048:LYS:HE3	1:A:3061:LEU:HD13	1.86	0.58
1:F:1357:LYS:HE2	1:F:1410:PRO:HG2	1.86	0.58
1:F:1755:SER:HB3	1:F:1758:LEU:HD13	1.84	0.58
1:F:3472:ILE:HG12	1:F:3479:THR:HB	1.85	0.58
1:F:3764:VAL:HA	1:F:3767:LEU:HD12	1.86	0.58
4:R:18:LEU:HD12	4:R:97:CYS:HB2	1.86	0.58
10:I:34:DC:C6	10:I:35:DT:H72	2.39	0.58
1:A:67:VAL:HA	1:A:71:LYS:NZ	2.18	0.58
1:A:523:THR:HG23	1:A:525:LYS:H	1.68	0.58
1:A:1671:VAL:O	1:A:1674:THR:HB	2.04	0.58
1:A:2298:GLU:HA	1:A:2301:GLN:HB3	1.86	0.58
1:A:3148:GLN:HE21	1:A:3150:ASN:HA	1.69	0.58
1:F:745:VAL:HA	1:F:748:TYR:HD2	1.67	0.58
1:F:2491:THR:OG1	1:F:2492:ASP:N	2.36	0.58
2:O:4:LYS:HG2	2:O:75:LEU:HA	1.85	0.58
4:Q:130:LEU:C	4:R:42:GLN:HA	2.24	0.58
1:A:203:GLU:O	1:A:207:GLN:HG2	2.04	0.58
1:A:656:GLN:O	1:A:659:ARG:HB3	2.04	0.58
1:A:1476:HIS:H	1:A:1524:LEU:HD21	1.68	0.58
1:A:1722:PHE:CE2	1:A:1765:VAL:HG13	2.39	0.58
1:A:2346:ALA:HB2	1:A:2377:ARG:HH11	1.68	0.58
1:A:2817:LEU:HD22	1:A:2865:HIS:CE1	2.38	0.58
1:A:3981:TYR:OH	1:A:4101:GLU:OE1	2.22	0.58
1:A:3991:PHE:HB3	1:A:4051:LEU:HD11	1.86	0.58
1:F:1605:PHE:O	1:F:1608:ARG:NH2	2.23	0.58
1:F:3590:ASN:HA	1:F:3593:ARG:HD2	1.86	0.58
2:K:188:LYS:NZ	3:M:764:SER:O	2.34	0.58
2:N:59:MET:HA	2:N:102:LYS:HD3	1.84	0.58
2:O:36:LEU:HD11	2:O:95:PHE:HB2	1.86	0.58
3:P:670:THR:HG23	3:P:674:PRO:HA	1.85	0.58
1:A:268:PRO:O	1:A:272:LEU:HG	2.04	0.58
1:A:919:LEU:HG	1:A:920:THR:HG23	1.84	0.58
1:A:3479:THR:O	1:A:3483:MET:N	2.28	0.58
1:A:3787:GLN:NE2	1:A:3788:LEU:O	2.37	0.58
1:A:4054:ALA:HB1	1:A:4059:ILE:HD11	1.86	0.58
1:A:4086:ASP:HA	1:A:4089:ILE:HG12	1.86	0.58
1:F:1866:GLN:OE1	1:F:1866:GLN:N	2.30	0.58
2:O:94:TYR:OH	2:O:107:ARG:NH2	2.37	0.58
3:P:716:ASN:HA	3:P:745:HIS:NE2	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:J:20:DT:H2'	11:J:21:DA:H8	1.69	0.58
1:A:19:LEU:HD22	1:A:34:LEU:HD23	1.85	0.57
1:A:738:HIS:HA	1:A:741:ILE:HG12	1.86	0.57
1:A:1082:PHE:HA	1:A:1085:ILE:HG12	1.86	0.57
1:A:2429:ASP:OD1	1:A:2430:GLU:N	2.37	0.57
1:A:3736:LYS:HB2	1:A:3752:VAL:HB	1.85	0.57
1:F:1418:HIS:HA	1:F:1421:GLU:HG2	1.85	0.57
1:F:2797:VAL:O	1:F:2801:ASP:N	2.32	0.57
1:F:2974:GLU:HG3	1:F:2978:LYS:NZ	2.19	0.57
1:F:3831:ASP:HB3	1:F:3832:PRO:HD3	1.86	0.57
2:L:118:ASN:HB2	2:L:121:GLU:HB2	1.86	0.57
3:P:814:ARG:HB3	3:P:849:GLY:N	2.19	0.57
1:A:3164:TRP:HA	1:A:3241:LYS:NZ	2.19	0.57
2:K:2:GLU:OE1	2:K:4:LYS:NZ	2.36	0.57
2:K:22:VAL:HG11	2:K:71:ARG:HH22	1.67	0.57
2:L:32:PHE:HD2	2:L:34:ILE:HG13	1.68	0.57
2:L:178:LYS:HG3	3:M:792:MET:CE	2.33	0.57
4:R:56:GLN:O	4:R:60:GLU:HG2	2.04	0.57
1:A:771:ASN:OD1	1:A:854:ARG:NH2	2.32	0.57
1:A:1423:ILE:HG23	1:A:1467:ILE:HD11	1.87	0.57
1:A:2448:PRO:HA	1:A:2451:LEU:HB2	1.85	0.57
1:A:4055:ASN:HD22	1:A:4058:VAL:HG23	1.68	0.57
1:F:1371:VAL:O	1:F:1374:GLN:HB2	2.05	0.57
1:F:1568:ASN:HA	1:F:1600:MET:HE1	1.86	0.57
1:F:1785:ILE:HA	1:F:1788:ARG:HB2	1.86	0.57
1:F:3192:LYS:O	1:F:3196:LYS:HG2	2.03	0.57
2:O:56:ALA:HB1	2:O:63:LYS:HA	1.86	0.57
1:A:207:GLN:NE2	1:A:215:PRO:O	2.38	0.57
1:A:221:ALA:O	1:A:225:LYS:HG3	2.05	0.57
1:A:1603:GLN:O	1:A:1607:GLU:N	2.37	0.57
1:A:1669:PRO:HA	1:A:1672:PHE:HB3	1.84	0.57
1:A:2313:LYS:HA	1:A:2316:TYR:CZ	2.39	0.57
1:A:2532:PRO:O	1:A:2538:ARG:NH1	2.38	0.57
1:A:3357:ARG:HB2	1:A:3358:ARG:HH11	1.68	0.57
1:F:1849:ASP:OD1	1:F:1850:VAL:N	2.37	0.57
1:F:2257:PHE:HA	1:F:2260:PHE:CE2	2.40	0.57
1:F:2310:VAL:HG11	1:F:2359:LYS:HE3	1.85	0.57
1:F:2571:ASP:HA	1:F:2574:ASN:HD22	1.68	0.57
1:F:2897:LEU:HD23	1:F:3973:PRO:HB3	1.87	0.57
2:K:56:ALA:HB1	2:K:62:GLU:HA	1.86	0.57
3:P:720:VAL:HG11	3:P:744:ILE:HB	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:Q:72:PHE:HA	4:Q:75:HIS:CE1	2.39	0.57
8:D:15:DA:H2''	8:D:16:DA:C8	2.38	0.57
1:A:890:LYS:HG2	1:A:3889:ARG:HH22	1.69	0.57
1:A:3294:SER:O	1:A:3298:LEU:HG	2.05	0.57
1:F:172:GLU:HB2	1:F:219:VAL:HG12	1.86	0.57
1:F:2295:GLN:HE21	1:F:2299:TYR:N	2.02	0.57
2:N:102:LYS:HE2	4:Q:75:HIS:HB2	1.86	0.57
8:D:37:DG:N3	9:E:21:DA:H8	2.02	0.57
1:A:2571:ASP:HA	1:A:2574:ASN:HD22	1.70	0.57
1:F:299:LYS:O	1:F:303:HIS:ND1	2.34	0.57
1:F:1022:ASP:OD1	1:F:1025:LEU:N	2.35	0.57
1:F:2965:TYR:HB3	1:F:3001:CYS:HB2	1.86	0.57
1:F:3109:SER:O	1:F:3113:ASN:ND2	2.37	0.57
1:F:3792:SER:N	1:F:3804:GLU:OE1	2.37	0.57
1:F:3927:ASN:O	1:F:3940:ILE:N	2.29	0.57
1:F:4120:THR:OG1	1:F:4126:PRO:HB3	2.04	0.57
2:N:3:ARG:HA	2:N:21:GLN:HA	1.85	0.57
2:N:152:LEU:HA	2:O:151:LEU:HD22	1.87	0.57
3:P:721:VAL:HG22	3:P:742:PHE:HE2	1.69	0.57
4:R:129:SER:O	4:R:133:GLN:NE2	2.35	0.57
8:D:23:DT:H2'	8:D:24:DT:N3	2.19	0.57
1:A:75:SER:O	1:A:79:ARG:NH1	2.37	0.57
1:A:1921:ASP:OD1	1:A:1922:ALA:N	2.38	0.57
1:F:1389:VAL:O	1:F:1392:MET:HG3	2.03	0.57
1:F:2507:ILE:HA	1:F:2510:LEU:HD12	1.87	0.57
1:F:2527:HIS:CD2	1:F:2529:THR:H	2.22	0.57
1:F:3048:LYS:HD2	1:F:3061:LEU:HB2	1.86	0.57
4:R:30:THR:OG1	4:R:33:GLY:O	2.21	0.57
1:A:489:ARG:O	1:A:492:SER:OG	2.22	0.57
1:A:724:GLU:CB	1:A:2600:THR:H	2.16	0.57
1:F:79:ARG:HH21	1:F:82:ARG:HD2	1.68	0.57
1:F:466:LEU:HD21	1:F:560:LEU:HD22	1.85	0.57
1:F:2497:GLU:HA	1:F:2500:LYS:HE2	1.86	0.57
1:F:3494:GLN:HG2	1:F:3495:PHE:CD2	2.39	0.57
1:F:3530:VAL:O	1:F:3534:ILE:HG12	2.04	0.57
1:F:4010:SER:HA	1:F:4038:TRP:HE1	1.70	0.57
3:M:816:HIS:O	3:M:851:LYS:N	2.35	0.57
4:Q:198:LEU:HD11	4:R:220:ALA:HB1	1.86	0.57
1:A:3109:SER:O	1:A:3112:GLN:NE2	2.37	0.57
1:A:3898:LEU:HA	1:A:3901:ARG:HE	1.68	0.57
1:F:717:LYS:HB3	1:F:721:TYR:CZ	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2361:ILE:HD12	1:F:2364:LEU:HD23	1.86	0.57
1:F:3044:MET:HB3	1:F:3048:LYS:HZ1	1.69	0.57
1:F:3730:ALA:HA	1:F:3734:ARG:HA	1.87	0.57
11:J:32:DT:H2''	11:J:33:DA:C8	2.40	0.57
1:A:3169:PRO:HD2	1:A:3179:TRP:CZ3	2.40	0.57
1:F:1034:ARG:HD3	1:F:1084:ASN:HB3	1.85	0.57
1:F:2724:ASP:OD1	1:F:2725:LEU:N	2.38	0.57
2:L:89:SER:O	2:L:93:CYS:N	2.38	0.57
2:O:32:PHE:HZ	2:O:109:GLY:HA3	1.69	0.57
1:A:71:LYS:HD2	1:A:78:PHE:HB3	1.87	0.56
1:F:1058:SER:HA	1:F:1061:LYS:HE2	1.87	0.56
1:F:2991:LYS:O	1:F:2995:GLU:HG2	2.03	0.56
1:A:166:ILE:HG13	1:A:167:PRO:HD3	1.86	0.56
1:A:1294:VAL:HA	1:A:1297:PHE:CD2	2.41	0.56
1:F:864:GLY:HA2	1:F:867:ASN:HB2	1.87	0.56
1:F:1205:ASN:HD22	1:F:1275:THR:HA	1.70	0.56
1:F:1370:ARG:O	1:F:1374:GLN:NE2	2.38	0.56
1:F:3117:ILE:O	1:F:3125:ARG:NH2	2.38	0.56
1:F:3663:THR:HA	1:F:3666:LEU:HD12	1.87	0.56
1:F:3733:ARG:NH2	1:F:3755:GLY:H	2.03	0.56
1:F:3980:MET:N	1:F:3980:MET:SD	2.79	0.56
2:K:188:LYS:HD3	3:M:768:ASP:HA	1.86	0.56
4:R:162:LEU:HA	4:R:165:GLN:HG2	1.87	0.56
10:I:28:DT:H5'	11:J:30:DT:H1'	1.86	0.56
1:A:153:PHE:HZ	1:A:196:LEU:HD11	1.69	0.56
1:A:165:LYS:O	1:A:165:LYS:HD3	2.05	0.56
1:A:665:GLY:O	1:A:669:LEU:HG	2.06	0.56
1:A:676:ASN:HA	1:A:679:LYS:HE2	1.88	0.56
1:A:935:HIS:HD2	1:A:2773:ARG:NH1	2.03	0.56
1:A:949:PRO:HB3	1:F:2582:SER:HA	1.87	0.56
1:A:1201:ASN:ND2	1:A:1210:ASP:OD2	2.39	0.56
1:A:1420:ARG:NE	1:A:1466:ASN:O	2.38	0.56
1:A:2263:LYS:HE3	1:A:2265:PRO:HB3	1.87	0.56
1:F:891:ARG:NH1	1:F:957:PRO:O	2.39	0.56
1:F:2292:CYS:SG	1:F:2293:GLY:N	2.77	0.56
1:F:3084:GLN:OE1	1:F:3084:GLN:N	2.30	0.56
4:R:62:ASN:ND2	4:R:120:ASN:H	2.03	0.56
4:R:198:LEU:O	4:R:202:CYS:N	2.38	0.56
10:I:29:DA:H1'	10:I:30:DA:N7	2.20	0.56
1:A:27:ALA:O	1:A:30:ALA:N	2.27	0.56
1:A:1867:ILE:HD13	1:A:1936:ARG:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2157:PHE:HB2	1:A:2160:TYR:HB3	1.86	0.56
1:A:2383:PHE:O	1:A:2418:LYS:NZ	2.38	0.56
1:A:3292:GLY:O	1:A:3296:GLN:HB3	2.04	0.56
1:A:3834:ALA:O	1:A:3839:TYR:N	2.37	0.56
1:F:898:PHE:HB2	1:F:901:MET:O	2.05	0.56
3:P:865:ILE:N	3:P:889:LEU:HD11	2.20	0.56
4:Q:55:SER:HB3	4:Q:69:PRO:HB3	1.85	0.56
4:R:157:LEU:HD21	4:R:184:PHE:HD2	1.71	0.56
8:D:29:DG:H21	9:E:29:DA:H1'	1.70	0.56
1:A:1296:PHE:HA	1:A:1299:GLU:HB3	1.87	0.56
1:A:3131:SER:O	1:A:3135:LEU:HG	2.05	0.56
1:F:915:THR:O	1:F:919:LEU:N	2.37	0.56
1:F:1172:LEU:O	1:F:1176:CYS:N	2.39	0.56
1:F:1534:ASN:HB2	1:F:1556:GLY:H	1.71	0.56
1:F:1727:ARG:NE	1:F:1772:HIS:HA	2.21	0.56
1:F:2219:LEU:HD13	1:F:2238:ILE:HG12	1.87	0.56
1:F:2279:ILE:O	1:F:2283:ASN:ND2	2.37	0.56
3:M:670:THR:HG23	3:M:674:PRO:HA	1.87	0.56
2:O:44:THR:H	2:O:116:VAL:HG13	1.70	0.56
1:A:79:ARG:HA	1:A:82:ARG:HG2	1.86	0.56
1:A:2301:GLN:HA	1:A:2304:VAL:HG22	1.87	0.56
1:A:2366:LYS:HA	1:A:2369:LYS:HE2	1.88	0.56
1:A:3659:PHE:HA	1:A:3662:ILE:HD12	1.87	0.56
1:F:175:TYR:O	1:F:227:LEU:HD12	2.06	0.56
1:F:271:GLY:HA2	1:F:274:LEU:HD13	1.88	0.56
1:F:2391:GLY:O	1:F:2431:ARG:NH2	2.36	0.56
1:F:3478:GLU:OE1	1:F:3478:GLU:N	2.38	0.56
3:M:720:VAL:HB	3:M:745:HIS:H	1.70	0.56
2:N:151:LEU:HD13	2:O:152:LEU:HB2	1.88	0.56
3:P:772:ASN:O	3:P:776:GLU:HG2	2.05	0.56
1:A:530:LEU:O	1:A:534:LEU:N	2.35	0.56
1:A:1791:CYS:SG	1:A:1832:SER:OG	2.59	0.56
1:F:43:VAL:O	1:F:46:SER:OG	2.22	0.56
1:F:2357:GLU:HA	1:F:2360:PHE:HB3	1.88	0.56
3:M:738:TRP:HB2	3:M:753:HIS:CE1	2.41	0.56
1:A:3676:PRO:HB2	1:A:3681:LYS:HB2	1.87	0.56
1:F:863:GLY:HA3	1:F:3168:TYR:HB2	1.86	0.56
8:D:15:DA:H2	9:E:44:DG:C6	2.23	0.56
1:A:1693:VAL:HG21	1:A:1746:PHE:CZ	2.41	0.56
1:A:2477:LEU:HA	1:A:2480:ILE:HD12	1.88	0.56
1:A:3301:LEU:CG	1:A:3305:SER:H	2.13	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:200:PHE:CE2	1:F:227:LEU:HD22	2.41	0.56
1:F:2245:TRP:HB2	1:F:2249:LEU:HD11	1.86	0.56
1:F:3496:ILE:HD12	1:F:3707:GLY:H	1.69	0.56
1:F:4100:GLU:OE1	1:F:4100:GLU:N	2.32	0.56
4:Q:34:TYR:HD1	4:Q:54:VAL:HG22	1.71	0.56
4:R:73:LEU:O	4:R:77:ASP:HB2	2.06	0.56
1:A:1190:LEU:HD23	1:A:1193:LYS:HD3	1.87	0.56
1:F:639:ALA:HB2	1:F:676:ASN:HB3	1.88	0.56
1:F:1149:LYS:O	1:F:1151:ARG:NH1	2.39	0.56
1:F:2252:PRO:HD2	1:F:2256:ILE:HD11	1.88	0.56
4:Q:45:TRP:HA	4:Q:124:MET:SD	2.45	0.56
9:E:28:DT:H1'	9:E:29:DA:H5''	1.86	0.56
1:A:1639:LEU:HA	1:A:1642:LYS:HE3	1.87	0.55
1:A:2737:GLU:O	1:A:2741:LEU:N	2.35	0.55
1:F:122:LYS:HG3	1:F:124:LYS:HD3	1.88	0.55
1:F:301:CYS:HA	1:F:309:LYS:HA	1.88	0.55
1:F:1050:GLU:OE1	1:F:1057:LYS:NZ	2.38	0.55
4:R:34:TYR:HH	4:R:119:TRP:HZ2	1.51	0.55
4:R:55:SER:OG	4:R:69:PRO:HB3	2.06	0.55
1:A:273:ARG:O	1:A:277:LEU:HG	2.06	0.55
1:A:2548:PRO:HB3	1:A:2847:THR:HA	1.89	0.55
1:A:3445:LEU:O	1:A:3448:GLU:HG2	2.06	0.55
1:A:3500:SER:HA	1:A:3503:VAL:HG12	1.89	0.55
1:A:3738:ILE:O	1:A:3749:PRO:HA	2.06	0.55
1:A:3771:MET:HA	1:A:3774:ILE:HD12	1.89	0.55
1:F:639:ALA:O	1:F:643:GLU:N	2.39	0.55
1:F:923:ASP:O	1:F:926:THR:N	2.39	0.55
1:F:2321:GLU:O	1:F:2325:LEU:HG	2.06	0.55
1:F:2548:PRO:HB3	1:F:2847:THR:HA	1.89	0.55
1:F:3239:LYS:HB3	1:F:3258:LEU:HD21	1.87	0.55
2:L:6:SER:HB3	2:L:20:LEU:HD12	1.89	0.55
2:L:56:ALA:HB3	2:L:63:LYS:HE3	1.86	0.55
2:N:32:PHE:HZ	2:N:70:LEU:HD12	1.71	0.55
4:Q:139:LEU:HA	4:Q:142:MET:HE2	1.87	0.55
8:D:25:DT:H3'	8:D:26:DT:H72	1.87	0.55
1:A:61:ARG:HH11	1:A:65:LEU:HD12	1.72	0.55
1:A:1086:TYR:CE1	1:A:1133:HIS:HB3	2.41	0.55
1:A:2225:HIS:CE1	1:A:2234:ASN:HD21	2.24	0.55
1:A:2481:HIS:HE2	1:A:2530:ARG:HG3	1.72	0.55
1:A:2806:LYS:HB2	1:A:2857:CYS:HB2	1.89	0.55
1:A:3444:ALA:HA	1:A:3482:LEU:HD11	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:323:VAL:HA	1:F:326:MET:HG2	1.87	0.55
1:F:1468:LEU:HD22	1:F:1521:PHE:CZ	2.41	0.55
1:F:2348:GLN:O	1:F:2353:GLN:NE2	2.39	0.55
1:F:3495:PHE:O	1:F:3499:ILE:N	2.39	0.55
1:F:3502:MET:HG3	1:F:3518:VAL:HG11	1.87	0.55
1:F:3962:ARG:HD2	1:F:4124:TRP:NE1	2.21	0.55
2:O:21:GLN:HE21	2:O:126:LEU:HA	1.71	0.55
1:A:2801:ASP:OD2	1:A:2804:ILE:N	2.29	0.55
1:A:3459:ASN:O	1:A:3463:LEU:HG	2.07	0.55
1:F:306:VAL:HA	1:F:309:LYS:HD3	1.87	0.55
1:F:1038:LYS:HA	1:F:1041:ILE:HD12	1.87	0.55
2:N:155:TRP:CE2	2:O:154:ASP:HB3	2.42	0.55
3:P:817:THR:HG1	3:P:861:SER:HG	1.51	0.55
1:A:303:HIS:O	1:A:309:LYS:NZ	2.22	0.55
1:A:851:ILE:O	1:A:855:VAL:HG23	2.07	0.55
1:A:2446:LEU:HD23	1:A:2451:LEU:HD23	1.88	0.55
1:A:3357:ARG:O	1:A:3360:LEU:HB3	2.07	0.55
1:F:1015:ASP:OD1	1:F:1015:ASP:N	2.37	0.55
1:F:1626:TRP:HZ2	1:F:1674:THR:HG21	1.70	0.55
2:N:16:ILE:HG12	2:N:38:ASP:HB2	1.88	0.55
1:A:1676:ILE:O	1:A:1680:ALA:N	2.35	0.55
1:A:2514:ASN:ND2	1:A:2517:LEU:HG	2.21	0.55
1:A:3293:CYS:SG	1:A:3340:ALA:HB1	2.46	0.55
1:A:4008:GLU:OE2	1:A:4014:LYS:NZ	2.37	0.55
1:F:2097:LEU:O	1:F:2101:VAL:HG23	2.06	0.55
1:F:2987:THR:HG22	1:F:2990:GLU:HG3	1.89	0.55
1:F:3554:PHE:HA	1:F:3557:ARG:NE	2.22	0.55
1:F:3741:ARG:HA	1:F:3747:GLU:HA	1.87	0.55
1:A:1821:ASP:OD1	1:A:1875:LYS:NZ	2.24	0.55
1:F:1582:LEU:HD11	1:F:1597:LEU:HD21	1.88	0.55
2:K:188:LYS:HE3	3:M:769:THR:HG23	1.89	0.55
2:N:55:GLU:HA	2:N:58:ASP:HB2	1.88	0.55
3:P:668:SER:OG	3:P:704:SER:N	2.38	0.55
4:R:16:LEU:HA	4:R:83:LEU:HA	1.88	0.55
1:A:894:PHE:O	1:A:905:ILE:N	2.37	0.55
1:A:1675:TYR:HA	1:A:1678:LEU:HD12	1.88	0.55
1:A:3593:ARG:NH2	1:A:3657:SER:O	2.37	0.55
1:F:1627:LYS:HE2	1:F:1674:THR:OG1	2.07	0.55
1:F:1709:GLU:OE1	1:F:1709:GLU:N	2.33	0.55
3:M:800:GLU:HA	3:M:805:TRP:HB2	1.87	0.55
2:O:55:GLU:OE1	2:O:66:TYR:OH	2.23	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:P:820:LEU:HD21	3:P:841:LYS:HB3	1.87	0.55
1:A:111:CYS:HB2	1:A:130:LEU:HD22	1.87	0.55
1:A:865:GLN:OE1	1:A:3171:ALA:N	2.39	0.55
1:A:2197:THR:O	1:A:2201:THR:OG1	2.24	0.55
1:A:3472:ILE:HA	1:A:3479:THR:HG21	1.89	0.55
1:F:103:TYR:O	1:F:106:GLU:HB2	2.06	0.55
1:F:2335:ASN:OD1	1:F:2336:ILE:N	2.39	0.55
1:F:2507:ILE:HG22	1:F:2550:ILE:HG13	1.87	0.55
3:M:753:HIS:NE2	3:M:757:GLU:OE2	2.40	0.55
2:O:33:VAL:HG22	2:O:47:VAL:HG13	1.89	0.55
1:A:18:THR:O	1:A:22:ALA:N	2.39	0.55
1:A:3251:ASN:O	1:A:3254:LEU:HD22	2.06	0.55
1:A:3622:ALA:O	1:A:3630:ARG:NE	2.40	0.55
1:A:3699:LEU:O	1:A:3719:ILE:N	2.40	0.55
1:F:2348:GLN:O	1:F:2352:HIS:NE2	2.40	0.55
1:F:3081:HIS:HB2	1:F:3082:TYR:CE2	2.42	0.55
1:F:3424:LEU:HD21	1:F:3443:PRO:HG3	1.89	0.55
1:F:3974:MET:HE2	1:F:3977:THR:H	1.72	0.55
1:F:3995:PRO:HD3	1:F:4051:LEU:HD22	1.88	0.55
2:K:153:ARG:HD2	2:K:154:ASP:N	2.22	0.55
3:M:875:PHE:HD2	3:M:888:ILE:HG23	1.71	0.55
2:N:145:GLN:HB2	2:O:144:LEU:HD13	1.89	0.55
1:A:138:PHE:O	1:A:142:ARG:HD2	2.07	0.54
1:A:895:ALA:HA	1:A:904:VAL:HA	1.90	0.54
1:A:1071:ASN:O	1:A:1075:ARG:NE	2.38	0.54
1:A:1504:ASP:H	1:A:1507:CYS:HB2	1.72	0.54
1:A:2394:LYS:O	1:A:2398:LEU:HG	2.06	0.54
1:A:3062:LEU:HD13	1:A:3089:LEU:HD11	1.89	0.54
1:A:3151:LEU:HB3	1:A:3197:LEU:HA	1.88	0.54
1:A:3639:GLU:HG2	1:A:3667:LEU:HD11	1.88	0.54
1:F:913:ARG:NH2	1:F:2801:ASP:OD1	2.34	0.54
1:F:3061:LEU:O	1:F:3065:ILE:HG12	2.07	0.54
1:F:3825:LYS:HA	1:F:3829:LEU:HD13	1.88	0.54
1:F:3881:ASP:HB3	1:F:3885:ARG:HH22	1.72	0.54
3:M:812:MET:SD	3:M:848:HIS:HB3	2.47	0.54
4:Q:31:LYS:HG3	4:Q:32:GLN:HG2	1.89	0.54
4:R:41:LEU:HD21	4:R:139:LEU:HD11	1.88	0.54
8:D:29:DG:N2	9:E:29:DA:H1'	2.22	0.54
1:A:418:ALA:HB3	1:A:463:LYS:HD3	1.89	0.54
1:A:1416:GLU:O	1:A:1420:ARG:N	2.27	0.54
1:A:2869:LEU:HD13	1:A:2896:ALA:HA	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1164:CYS:SG	1:F:1165:LEU:N	2.80	0.54
1:F:1949:ILE:HG12	1:F:2100:LEU:HD21	1.88	0.54
3:M:869:HIS:CE1	3:M:890:LYS:HA	2.42	0.54
2:O:38:ASP:OD1	2:O:41:SER:N	2.33	0.54
4:Q:17:GLN:HB2	4:Q:83:LEU:HD12	1.89	0.54
4:Q:54:VAL:HG12	4:Q:72:PHE:HB3	1.89	0.54
11:J:16:DA:H2'	11:J:17:DT:C4	2.42	0.54
1:A:1072:ALA:HA	1:A:1075:ARG:HH21	1.71	0.54
1:A:1142:HIS:HA	1:A:1145:LEU:HD13	1.89	0.54
1:A:1386:ILE:HG13	1:A:1387:GLY:H	1.71	0.54
1:A:3419:PHE:O	1:A:3423:GLN:HG2	2.08	0.54
1:A:3856:MET:O	1:A:3860:LYS:HB2	2.07	0.54
1:A:3986:HIS:HA	1:A:3989:ARG:HE	1.73	0.54
1:F:928:VAL:HB	1:F:2769:VAL:HG11	1.89	0.54
1:F:2851:PHE:HB3	1:F:2854:PHE:HB3	1.88	0.54
8:D:28:DA:H2''	8:D:29:DG:N7	2.22	0.54
1:A:419:SER:HB3	1:A:463:LYS:HZ1	1.71	0.54
1:A:667:TYR:HA	1:A:670:LEU:HD12	1.89	0.54
1:A:935:HIS:CD2	1:A:2773:ARG:HH12	2.25	0.54
1:A:3512:VAL:HA	1:A:3515:GLN:OE1	2.07	0.54
1:F:1419:LEU:HG	1:F:1467:ILE:HD13	1.90	0.54
1:F:1510:LEU:O	1:F:1514:LEU:HG	2.07	0.54
1:F:2376:ASP:HB3	1:F:2404:ARG:NH2	2.22	0.54
1:F:3582:GLU:O	1:F:3586:LYS:HG2	2.07	0.54
2:O:5:ILE:HA	2:O:21:GLN:HA	1.90	0.54
1:A:1005:ASP:OD1	1:A:1005:ASP:N	2.41	0.54
1:A:1086:TYR:CD1	1:A:1133:HIS:HB3	2.42	0.54
1:A:1190:LEU:O	1:A:1193:LYS:HG2	2.07	0.54
1:A:2411:LEU:O	1:A:2415:LEU:HG	2.07	0.54
1:A:2771:LEU:HD23	1:A:2771:LEU:H	1.72	0.54
1:A:3159:ARG:HA	1:A:3162:ASN:ND2	2.23	0.54
1:A:3959:MET:N	1:A:3959:MET:SD	2.81	0.54
1:F:218:PRO:HG3	11:J:21:DA:OP2	2.07	0.54
1:F:456:VAL:HA	1:F:459:ARG:HD2	1.89	0.54
1:F:1270:PHE:HB3	1:F:1276:VAL:HG12	1.88	0.54
1:F:2415:LEU:HA	1:F:2418:LYS:HB2	1.90	0.54
1:F:2466:SER:C	1:F:2470:ARG:HH21	2.11	0.54
1:F:3449:LYS:HA	1:F:3452:LYS:HD3	1.90	0.54
2:K:94:TYR:HE1	2:K:96:PHE:HB3	1.72	0.54
8:D:24:DT:H3	9:E:33:DA:H2	1.54	0.54
1:A:103:TYR:HA	1:A:106:GLU:OE2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2869:LEU:HB2	1:A:2899:ARG:HH21	1.72	0.54
1:F:582:THR:HB	1:F:615:ALA:HB2	1.89	0.54
1:F:710:PHE:O	1:F:713:GLU:HG2	2.08	0.54
1:F:1250:LEU:O	1:F:1254:LEU:HG	2.08	0.54
1:F:2773:ARG:HH21	1:F:2775:TYR:HE1	1.55	0.54
1:F:3383:GLN:O	1:F:3386:SER:OG	2.20	0.54
2:N:4:LYS:HB3	2:N:20:LEU:HB3	1.89	0.54
2:N:190:LYS:HE2	2:N:194:LEU:HD11	1.90	0.54
1:A:1164:CYS:SG	1:A:1165:LEU:N	2.80	0.54
1:A:2974:GLU:O	1:A:2978:LYS:N	2.41	0.54
1:A:3149:GLY:O	1:A:3152:SER:OG	2.25	0.54
1:A:3841:ASP:OD1	1:A:3866:GLU:HG3	2.06	0.54
1:F:1115:HIS:O	1:F:1119:LYS:NZ	2.34	0.54
1:F:1407:LYS:HA	1:F:1412:LYS:HB3	1.90	0.54
1:F:1697:PRO:HA	1:F:1753:SER:HB2	1.90	0.54
1:F:2196:TRP:HE1	1:F:2200:ALA:HB3	1.71	0.54
1:F:3100:LYS:HA	1:F:3103:ILE:HG22	1.90	0.54
1:F:3373:VAL:O	1:F:3377:LEU:HG	2.07	0.54
1:F:4008:GLU:HG3	1:F:4011:PHE:HB2	1.89	0.54
1:A:275:PHE:HZ	1:A:319:PHE:HB2	1.73	0.54
1:A:976:VAL:HG22	1:A:977:ASP:H	1.72	0.54
1:A:1423:ILE:HG13	1:A:1425:ALA:H	1.73	0.54
1:A:3085:GLU:HA	1:A:3088:LEU:HD12	1.89	0.54
1:A:3279:SER:HA	1:A:3282:ARG:HH21	1.73	0.54
1:F:1418:HIS:O	1:F:1421:GLU:HG2	2.08	0.54
1:F:1691:GLN:O	1:F:1694:THR:OG1	2.24	0.54
1:F:3158:LYS:HE2	1:F:3186:ARG:HH12	1.72	0.54
1:F:3335:ARG:HG2	1:F:3339:ASN:HD21	1.71	0.54
4:Q:131:VAL:N	4:R:42:GLN:H	2.06	0.54
1:A:40:GLN:HE21	1:A:2426:HIS:CE1	2.26	0.54
1:A:380:ASP:HA	1:A:383:PHE:HB3	1.90	0.54
1:A:635:PRO:O	1:A:679:LYS:NZ	2.37	0.54
1:A:2578:GLU:OE1	1:A:2578:GLU:N	2.31	0.54
1:A:3156:PRO:HA	1:A:3159:ARG:CZ	2.38	0.54
1:F:1921:ASP:OD1	1:F:1922:ALA:N	2.41	0.54
1:F:3048:LYS:O	1:F:3052:LEU:HG	2.08	0.54
1:F:4057:ALA:HB1	1:F:4082:ARG:HA	1.90	0.54
2:K:42:ALA:HB3	2:K:116:VAL:HG11	1.89	0.54
3:M:871:ARG:HD2	3:M:874:ASP:OD2	2.08	0.54
4:R:187:ASN:OD1	4:R:188:SER:N	2.38	0.54
1:A:645:TRP:O	1:A:649:PHE:N	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2837:LEU:O	1:A:2841:ASN:ND2	2.40	0.54
1:A:3077:ILE:HA	1:A:3080:LEU:HB2	1.90	0.54
1:A:3447:VAL:HA	1:A:3450:MET:HG2	1.90	0.54
1:F:3659:PHE:HA	1:F:3662:ILE:HD12	1.89	0.54
2:K:20:LEU:HG	2:K:34:ILE:HD11	1.89	0.54
8:D:27:DT:O4	9:E:29:DA:N6	2.41	0.54
1:A:174:VAL:O	1:A:178:LEU:N	2.32	0.53
1:A:3571:PHE:O	1:A:3575:LEU:HG	2.09	0.53
1:F:828:LYS:HB2	1:F:830:VAL:HG22	1.90	0.53
1:F:1151:ARG:HH11	1:F:1163:LEU:HB2	1.72	0.53
1:F:2187:VAL:HG23	1:F:2728:LEU:HD21	1.89	0.53
1:F:2257:PHE:HA	1:F:2260:PHE:CZ	2.42	0.53
1:F:2414:GLN:O	1:F:2418:LYS:N	2.32	0.53
1:F:2464:HIS:CD2	1:F:2466:SER:HB3	2.42	0.53
1:F:3120:LEU:HD23	1:F:3120:LEU:H	1.73	0.53
2:K:92:SER:HB3	2:K:94:TYR:HD2	1.74	0.53
3:M:845:LEU:O	3:M:850:ALA:N	2.41	0.53
2:N:148:ASN:OD1	2:O:151:LEU:HD12	2.07	0.53
2:O:163:GLU:HA	3:P:846:ARG:NH2	2.21	0.53
4:Q:221:VAL:HG13	4:R:198:LEU:HD11	1.90	0.53
1:A:3159:ARG:HA	1:A:3162:ASN:HD21	1.72	0.53
1:A:3167:ARG:O	1:A:3168:TYR:C	2.47	0.53
1:A:3521:ILE:O	1:A:3525:TYR:N	2.32	0.53
1:A:3988:LEU:HD23	1:A:4100:GLU:HA	1.90	0.53
1:F:406:ARG:O	1:F:409:GLN:NE2	2.40	0.53
1:F:1588:ASP:OD1	1:F:1589:ASN:N	2.40	0.53
1:F:2228:ARG:HH22	1:F:2738:LYS:HD3	1.73	0.53
1:F:2253:TYR:H	1:F:2256:ILE:HD12	1.72	0.53
1:F:2575:PRO:HA	1:F:2786:LYS:HA	1.89	0.53
2:K:72:LYS:HZ2	2:K:86:PHE:HE2	1.55	0.53
3:M:876:LYS:O	3:M:880:ARG:HG2	2.08	0.53
2:O:9:HIS:NE2	2:O:86:PHE:O	2.41	0.53
4:Q:51:THR:OG1	4:Q:69:PRO:HB2	2.09	0.53
1:A:2391:GLY:O	1:A:2431:ARG:NH2	2.38	0.53
1:A:2948:GLY:O	1:A:2951:GLN:NE2	2.41	0.53
1:A:3228:SER:OG	1:A:3232:ARG:NH2	2.41	0.53
1:F:62:ASP:O	1:F:66:LEU:HG	2.08	0.53
1:F:246:ARG:HA	1:F:249:PHE:CD2	2.43	0.53
1:F:901:MET:HB2	1:F:2819:GLU:HG2	1.89	0.53
1:F:1343:GLU:O	1:F:1346:THR:OG1	2.22	0.53
1:F:2404:ARG:NH1	1:F:2406:GLU:OE2	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2749:ALA:O	1:F:2753:ARG:HG2	2.08	0.53
1:F:3691:LYS:NZ	1:F:3693:GLU:OE2	2.41	0.53
2:K:71:ARG:HD3	2:K:75:LEU:HD12	1.90	0.53
3:M:661:ASP:H	3:M:688:TYR:HE1	1.56	0.53
3:M:720:VAL:N	3:M:745:HIS:O	2.29	0.53
3:P:836:THR:HG23	3:P:838:LEU:HG	1.90	0.53
1:A:1413:ASP:OD1	1:A:1414:ILE:N	2.41	0.53
1:A:1419:LEU:HD11	1:A:1467:ILE:HD13	1.90	0.53
1:A:3422:GLN:N	1:A:3425:ARG:HH21	2.06	0.53
1:F:94:GLU:OE1	1:F:837:THR:OG1	2.25	0.53
1:F:183:GLU:HG2	1:F:184:VAL:N	2.24	0.53
1:F:2350:LYS:HA	1:F:2354:ASN:OD1	2.09	0.53
1:F:4113:ASP:O	1:F:4117:LEU:HG	2.09	0.53
2:K:95:PHE:HB2	2:K:113:LEU:HD11	1.90	0.53
3:M:654:LYS:HB2	3:M:684:GLU:O	2.08	0.53
2:O:22:VAL:HG21	2:O:74:LEU:HD22	1.89	0.53
1:A:2213:ASN:ND2	1:A:2248:CYS:O	2.42	0.53
1:A:2213:ASN:OD1	1:A:2250:SER:N	2.41	0.53
1:F:531:PHE:O	1:F:534:LEU:HB2	2.07	0.53
1:F:941:MET:SD	1:F:942:LEU:N	2.82	0.53
1:F:994:TRP:CZ2	1:F:1000:LYS:HE3	2.43	0.53
1:F:1268:ASN:ND2	1:F:1347:THR:OG1	2.42	0.53
1:F:1455:CYS:HA	1:F:1458:LEU:HD12	1.90	0.53
1:F:1639:LEU:HD11	1:F:1688:LEU:HD13	1.91	0.53
1:F:2253:TYR:CE1	1:F:2288:TYR:HA	2.43	0.53
1:F:3424:LEU:HA	1:F:3427:GLU:HB2	1.91	0.53
4:Q:133:GLN:HB2	4:R:43:GLN:N	2.23	0.53
1:A:538:ASP:OD1	1:A:538:ASP:N	2.42	0.53
1:A:1331:ASN:HD21	1:A:1384:PHE:N	2.06	0.53
1:A:1333:SER:O	1:A:1337:VAL:HG23	2.08	0.53
1:A:1342:MET:HE3	1:A:1398:VAL:HG13	1.91	0.53
1:A:3114:TYR:HE1	1:A:3125:ARG:HB3	1.74	0.53
1:A:3915:HIS:HB2	1:A:3920:ILE:HB	1.91	0.53
1:F:363:ILE:O	1:F:416:SER:OG	2.24	0.53
1:F:967:PRO:HB2	1:F:971:ARG:NH2	2.23	0.53
1:F:996:THR:HG23	1:F:1043:GLN:NE2	2.23	0.53
1:F:1142:HIS:O	1:F:1146:ASN:N	2.37	0.53
1:F:1769:GLU:O	1:F:1822:ARG:NH1	2.41	0.53
1:F:2534:ASN:HB3	1:F:2537:ASP:HB2	1.90	0.53
1:F:3169:PRO:O	1:F:3179:TRP:NE1	2.42	0.53
1:F:3771:MET:O	1:F:3775:LEU:HG	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3874:ARG:NH2	1:F:4116:ILE:O	2.35	0.53
2:K:19:PHE:CE2	2:K:126:LEU:HD21	2.43	0.53
2:K:35:THR:HG22	2:K:44:THR:HG22	1.90	0.53
3:P:753:HIS:NE2	3:P:757:GLU:OE1	2.42	0.53
8:D:37:DG:N1	9:E:22:DA:N1	2.46	0.53
1:A:538:ASP:HA	1:A:541:MET:HG3	1.90	0.53
1:A:933:LEU:HD23	1:A:937:MET:HE2	1.91	0.53
1:A:997:ASN:OD1	1:A:1043:GLN:NE2	2.41	0.53
1:A:1098:GLN:OE1	1:A:1152:ARG:N	2.42	0.53
1:A:1279:LEU:H	1:A:1356:TRP:HE1	1.56	0.53
1:A:1849:ASP:OD1	1:A:1850:VAL:N	2.42	0.53
1:A:3283:LEU:O	1:A:3287:ARG:N	2.34	0.53
1:F:1278:ALA:HA	1:F:1281:VAL:HG22	1.91	0.53
1:F:1404:LYS:NZ	1:F:1460:ARG:O	2.37	0.53
1:F:2225:HIS:CE1	1:F:2234:ASN:HD21	2.27	0.53
1:F:3339:ASN:OD1	1:F:3378:TYR:OH	2.27	0.53
2:K:173:GLU:HG2	2:L:172:LEU:HD21	1.91	0.53
2:N:19:PHE:HE2	2:N:37:THR:HG1	1.56	0.53
2:N:191:ILE:HG23	2:O:194:LEU:HD11	1.91	0.53
2:O:53:SER:O	2:O:63:LYS:NZ	2.42	0.53
1:A:332:GLU:OE1	1:A:332:GLU:N	2.38	0.53
1:A:1504:ASP:O	1:A:1508:LYS:N	2.40	0.53
1:A:1729:PHE:HB3	1:A:1736:PHE:HB2	1.91	0.53
1:A:1766:LEU:HD13	1:A:1778:PHE:CD1	2.44	0.53
1:A:3321:LEU:HA	1:A:3324:ARG:NH1	2.24	0.53
1:A:3530:VAL:HG12	1:A:3562:LEU:HD22	1.89	0.53
1:A:3867:THR:HG23	1:A:4117:LEU:C	2.29	0.53
1:F:417:VAL:HA	1:F:420:VAL:HG12	1.90	0.53
1:F:2582:SER:OG	1:F:2583:GLU:N	2.42	0.53
1:F:2808:LEU:HD23	1:F:2812:LEU:HD23	1.91	0.53
1:F:4041:ARG:HA	1:F:4044:ILE:HG12	1.91	0.53
2:K:89:SER:HB3	2:K:96:PHE:CE1	2.43	0.53
11:J:21:DA:H2'	11:J:22:DG:N7	2.23	0.53
1:A:65:LEU:O	1:A:69:VAL:HG22	2.09	0.53
1:A:648:SER:O	1:A:651:TYR:HB3	2.09	0.53
1:A:1304:HIS:HB3	1:A:1307:ILE:O	2.09	0.53
1:A:3929:MET:O	1:A:3938:ILE:N	2.36	0.53
1:F:61:ARG:HB2	1:F:103:TYR:CE2	2.44	0.53
1:F:125:ILE:HD12	1:F:125:ILE:H	1.73	0.53
1:F:195:ASN:O	1:F:198:ARG:HG3	2.09	0.53
1:F:357:LYS:O	1:F:361:ILE:HG12	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1323:SER:N	1:F:1328:GLU:OE2	2.42	0.53
1:F:2485:ARG:NH2	1:F:2529:THR:O	2.42	0.53
1:F:3036:TYR:O	1:F:3039:THR:OG1	2.20	0.53
1:F:3981:TYR:HA	1:F:3984:MET:SD	2.49	0.53
3:P:722:LYS:H	3:P:742:PHE:HD2	1.56	0.53
4:Q:131:VAL:CA	4:R:42:GLN:H	2.22	0.53
1:F:71:LYS:HB2	1:F:82:ARG:HH21	1.73	0.53
1:F:162:LEU:HD11	1:F:164:LYS:HD3	1.90	0.53
1:F:1484:LEU:HD22	1:F:1531:LEU:HD13	1.91	0.53
1:F:2220:MET:HA	1:F:2223:VAL:HG12	1.91	0.53
1:F:2958:LEU:O	1:F:2962:ARG:HG2	2.09	0.53
4:Q:132:SER:HA	4:R:40:ASP:CA	2.39	0.53
10:I:35:DT:H2''	10:I:36:DA:C8	2.45	0.53
1:A:1604:SER:HA	1:A:1607:GLU:HB3	1.90	0.52
1:A:1759:LEU:HD11	1:A:1782:PHE:HE1	1.73	0.52
1:A:2295:GLN:HG3	1:A:2298:GLU:H	1.72	0.52
1:A:3810:VAL:HG11	1:A:3815:LEU:HD13	1.92	0.52
1:F:933:LEU:HD21	1:F:2794:LEU:HD23	1.91	0.52
1:F:1086:TYR:CE1	1:F:1133:HIS:HB3	2.43	0.52
1:F:1388:ASP:HA	1:F:1392:MET:HG2	1.91	0.52
1:F:3996:GLY:O	1:F:4000:ASN:ND2	2.42	0.52
2:O:86:PHE:HB2	2:O:95:PHE:HZ	1.74	0.52
1:A:240:GLU:HG2	1:A:241:ASP:H	4.86	0.52
1:A:468:LEU:HD21	1:A:478:CYS:HB2	1.91	0.52
1:A:1736:PHE:HA	1:A:1739:TYR:HD2	1.74	0.52
1:A:2586:PHE:CG	1:A:2782:ASP:HB3	2.44	0.52
1:F:790:LYS:HA	1:F:869:ASN:HB3	1.92	0.52
1:F:1635:LYS:HE3	1:F:1683:LYS:HG2	1.90	0.52
2:N:18:HIS:HB3	2:N:34:ILE:HD11	1.90	0.52
4:Q:24:LEU:HD13	4:Q:211:VAL:HG12	1.90	0.52
4:Q:61:LEU:HD11	4:Q:120:ASN:H	1.75	0.52
4:R:110:SER:HB2	4:R:117:PHE:HB3	1.91	0.52
10:I:45:DG:C8	10:I:45:DG:H5'	2.44	0.52
1:A:58:VAL:HG21	1:A:3098:ARG:HD2	1.90	0.52
1:A:99:LYS:O	1:A:102:PRO:HD2	2.10	0.52
1:A:406:ARG:O	1:A:409:GLN:NE2	2.42	0.52
1:A:1081:ALA:O	1:A:1085:ILE:HG23	2.09	0.52
1:A:1169:VAL:HG21	1:A:1198:LEU:HD21	1.91	0.52
1:A:1840:PHE:CZ	1:A:1844:VAL:HG22	2.44	0.52
1:A:2571:ASP:HA	1:A:2574:ASN:ND2	2.23	0.52
1:A:3515:GLN:HA	1:A:3518:VAL:HG12	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1238:GLN:HG3	1:F:1296:PHE:HZ	1.73	0.52
1:F:1576:ASP:HA	1:F:1579:VAL:HB	1.91	0.52
1:F:1674:THR:O	1:F:1678:LEU:HG	2.09	0.52
1:F:2304:VAL:O	1:F:2307:MET:HB3	2.09	0.52
1:F:2405:VAL:HA	1:F:2408:MET:HE1	1.92	0.52
1:F:2755:LYS:HA	1:F:2758:LYS:HE2	1.91	0.52
2:N:99:LYS:HB2	2:N:108:LEU:HD22	1.91	0.52
2:N:161:ARG:HB3	2:O:162:PHE:CE2	2.44	0.52
3:P:722:LYS:HG2	3:P:742:PHE:O	2.09	0.52
1:A:1111:LEU:HD12	1:A:1127:CYS:HB2	1.92	0.52
1:A:1164:CYS:N	1:A:1167:ASP:OD2	2.41	0.52
1:A:2931:ARG:HH12	1:A:2997:ALA:HA	1.74	0.52
1:A:3047:SER:O	1:A:3051:LEU:HG	2.09	0.52
1:A:3479:THR:HA	1:A:3482:LEU:HD12	1.90	0.52
1:F:440:VAL:HG21	1:F:485:GLN:HG3	1.92	0.52
1:F:1781:SER:HA	1:F:1784:ARG:HD3	1.91	0.52
1:F:3046:ARG:HH22	1:F:3177:ASN:HB3	1.74	0.52
1:F:3097:ASP:HA	1:F:3100:LYS:HE2	1.90	0.52
1:F:3585:PHE:HB3	1:F:3586:LYS:NZ	2.24	0.52
2:L:25:GLU:HG2	2:L:26:LYS:H	1.74	0.52
2:L:45:GLY:HA3	2:L:114:GLU:H	1.72	0.52
2:N:52:ILE:HG13	2:N:66:TYR:CG	2.44	0.52
4:R:57:ARG:HD2	4:R:61:LEU:HD22	1.91	0.52
4:R:119:TRP:CE2	4:R:121:PHE:HE1	2.28	0.52
1:A:215:PRO:O	1:A:217:LEU:N	2.42	0.52
1:A:345:PHE:HA	1:A:348:ILE:HG12	1.91	0.52
1:A:364:ARG:NH1	1:A:415:GLN:HB3	2.25	0.52
1:A:405:ASP:OD1	1:A:406:ARG:N	2.41	0.52
1:A:414:LEU:HB2	1:A:460:ALA:HB1	1.91	0.52
1:A:1145:LEU:HB3	1:A:1165:LEU:HB2	1.91	0.52
1:A:1697:PRO:HD3	1:A:1749:ALA:HB1	1.91	0.52
1:A:3643:HIS:HB3	1:A:3659:PHE:CZ	2.45	0.52
1:F:571:SER:HA	1:F:574:LYS:HE2	1.91	0.52
1:F:1474:ASP:OD1	1:F:1474:ASP:N	2.43	0.52
1:F:1603:GLN:O	1:F:1603:GLN:NE2	2.42	0.52
1:F:1649:LEU:HA	1:F:1652:ILE:HD12	1.91	0.52
2:K:145:GLN:N	2:L:144:LEU:HD21	2.24	0.52
4:Q:153:LEU:O	4:Q:157:LEU:HG	2.09	0.52
1:A:1331:ASN:ND2	1:A:1384:PHE:H	2.07	0.52
1:A:1754:GLN:NE2	1:A:1785:ILE:O	2.43	0.52
1:F:22:ALA:HA	1:F:24:ARG:HH11	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:637:LYS:O	1:F:679:LYS:NZ	2.41	0.52
1:F:3516:HIS:O	1:F:3519:GLU:HB3	2.10	0.52
3:M:869:HIS:HE2	3:M:890:LYS:HG2	1.74	0.52
2:N:193:SER:O	2:N:197:LYS:HG3	2.09	0.52
3:P:847:PHE:HD2	3:P:848:HIS:CE1	2.27	0.52
10:I:40:DT:O2	11:J:18:DA:H1'	2.09	0.52
1:A:79:ARG:HH21	1:A:82:ARG:HE	1.57	0.52
1:A:3269:ARG:HG3	1:A:3272:TRP:HB3	1.92	0.52
1:F:1232:PRO:HA	1:F:1235:ILE:HD12	1.91	0.52
1:F:1412:LYS:O	1:F:1415:LEU:HB2	2.10	0.52
1:F:1491:ILE:HG21	1:F:1558:TYR:HE2	1.74	0.52
1:F:1661:PHE:H	1:F:1665:HIS:CG	2.26	0.52
1:F:2124:SER:H	1:F:2126:MET:CE	2.22	0.52
2:K:198:LEU:HD13	2:L:198:LEU:HA	1.92	0.52
1:A:1009:LEU:O	1:A:1013:ILE:HG12	2.10	0.52
1:A:3350:GLU:HA	1:A:3357:ARG:CZ	2.40	0.52
1:A:3512:VAL:O	1:A:3516:HIS:ND1	2.43	0.52
1:A:3752:VAL:HG22	1:A:3802:LEU:HD13	1.90	0.52
1:F:738:HIS:HA	1:F:741:ILE:HG12	1.92	0.52
1:F:2571:ASP:O	1:F:2787:HIS:ND1	2.42	0.52
1:F:3419:PHE:O	1:F:3422:GLN:NE2	2.43	0.52
1:F:3628:PHE:CD1	1:F:3675:LYS:HB3	2.45	0.52
1:F:3662:ILE:O	1:F:3665:MET:HG2	2.10	0.52
2:L:3:ARG:NH2	2:L:125:GLU:OE1	2.42	0.52
2:O:69:GLU:HA	2:O:72:LYS:HG2	1.92	0.52
3:P:741:ARG:NH1	3:P:742:PHE:HB3	2.25	0.52
11:J:30:DT:C6	11:J:31:DT:H72	2.45	0.52
1:A:982:GLN:HG3	1:A:2591:ILE:HD12	1.92	0.52
1:A:1414:ILE:O	1:A:1417:THR:OG1	2.21	0.52
1:F:671:SER:HB3	1:F:732:PHE:HA	1.92	0.52
1:F:1789:GLY:O	1:F:1794:GLN:NE2	2.42	0.52
3:P:752:GLU:HG3	3:P:756:ARG:NH2	2.24	0.52
4:R:109:ARG:HA	4:R:119:TRP:HD1	1.75	0.52
1:A:483:VAL:HG21	1:A:567:GLU:HG3	1.92	0.52
1:A:560:LEU:O	1:A:564:LEU:HG	2.09	0.52
1:A:1743:MET:HA	1:A:1746:PHE:CD1	2.44	0.52
1:A:2196:TRP:HB2	1:A:2199:LEU:HB2	1.91	0.52
1:A:2746:LYS:NZ	9:E:44:DG:O6	2.36	0.52
1:A:3738:ILE:HD12	1:A:3740:ILE:HD11	1.91	0.52
1:F:13:LEU:HD23	1:F:3075:LYS:NZ	2.25	0.52
1:F:2126:MET:HG3	1:F:2160:TYR:HE2	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2395:THR:HA	1:F:2398:LEU:HD12	1.91	0.52
1:F:2940:ARG:HH21	1:F:3981:TYR:HB3	1.75	0.52
1:F:3104:GLN:OE1	1:F:3108:GLN:NE2	2.42	0.52
1:F:3962:ARG:HD2	1:F:4124:TRP:CE2	2.44	0.52
2:K:127:ILE:HG13	2:L:126:LEU:HD22	1.92	0.52
2:K:172:LEU:HD11	2:L:173:GLU:HB2	1.92	0.52
2:N:13:GLU:HG3	2:N:16:ILE:HD12	1.92	0.52
8:D:19:DA:H2	9:E:39:DA:C2	2.28	0.52
1:A:241:ASP:HA	1:A:244:THR:HG22	1.92	0.51
1:A:1307:ILE:HG12	1:A:1308:ALA:H	1.75	0.51
1:A:2165:LEU:HD11	1:A:2200:ALA:HB1	1.91	0.51
1:A:2246:LYS:H	1:A:2249:LEU:HG	1.74	0.51
1:A:2253:TYR:CE2	1:A:2289:ASP:HB3	2.44	0.51
1:A:3051:LEU:O	1:A:3054:GLN:HG2	2.11	0.51
1:A:3232:ARG:HA	1:A:3235:LYS:HD3	1.92	0.51
1:A:3295:GLU:HA	1:A:3298:LEU:HD12	1.92	0.51
1:F:3097:ASP:N	1:F:3097:ASP:OD1	2.42	0.51
1:F:3781:CYS:O	1:F:3785:ALA:N	2.43	0.51
1:F:3945:ALA:N	1:F:3948:SER:HG	2.07	0.51
2:K:155:TRP:HA	2:L:155:TRP:HD1	1.74	0.51
3:M:739:GLN:HB3	3:M:741:ARG:NH1	2.25	0.51
1:A:1278:ALA:HB3	1:A:1356:TRP:CD1	2.46	0.51
1:A:1867:ILE:HD11	1:A:1940:TYR:HB2	1.91	0.51
1:A:2740:SER:HA	1:A:2743:TYR:CD2	2.45	0.51
1:A:3912:CYS:HA	1:A:3915:HIS:CD2	2.45	0.51
1:F:714:VAL:HG12	1:F:733:LEU:HD11	1.92	0.51
1:F:886:TRP:O	1:F:888:ARG:NH1	2.34	0.51
1:F:939:MET:SD	1:F:2783:ILE:HD13	2.49	0.51
1:F:1071:ASN:ND2	1:F:1073:PHE:HB2	2.25	0.51
1:F:1412:LYS:HA	1:F:1415:LEU:HD13	1.92	0.51
1:F:2162:LYS:O	1:F:2165:LEU:HB3	2.11	0.51
2:L:141:ASN:O	2:L:145:GLN:HG3	2.10	0.51
3:P:669:GLY:H	3:P:675:LYS:HB2	1.75	0.51
1:A:1724:MET:O	1:A:1768:ARG:NE	2.44	0.51
1:F:289:ASN:O	1:F:292:SER:OG	2.22	0.51
1:F:977:ASP:OD1	1:F:978:GLN:N	2.42	0.51
1:F:1029:CYS:O	1:F:1033:ILE:HG12	2.11	0.51
1:F:1356:TRP:HD1	1:F:1359:LEU:HD11	1.75	0.51
1:F:1527:ARG:O	1:F:1531:LEU:HG	2.09	0.51
1:F:3466:PRO:HG3	1:F:3498:TRP:HE1	1.75	0.51
1:F:3871:PHE:HA	1:F:3874:ARG:HE	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:20:LEU:HD11	2:N:22:VAL:HB	1.92	0.51
3:P:814:ARG:N	3:P:849:GLY:H	2.08	0.51
4:R:14:ALA:HB1	4:R:83:LEU:HD21	1.92	0.51
9:E:23:DT:H1'	9:E:24:DA:N7	2.25	0.51
1:A:628:GLU:OE1	1:A:631:ARG:NH2	2.43	0.51
1:A:645:TRP:HB3	1:A:649:PHE:HB2	1.92	0.51
1:A:721:TYR:O	1:A:1023:SER:OG	2.27	0.51
1:A:1000:LYS:HA	1:A:1004:GLN:HE21	1.75	0.51
1:A:1851:LEU:HD23	1:A:1918:LEU:HD13	1.91	0.51
1:A:2230:VAL:HG12	1:A:2731:ARG:HB3	1.92	0.51
1:A:3320:ILE:HA	1:A:3323:PHE:HB3	1.91	0.51
1:F:153:PHE:HE2	1:F:192:ASN:HD22	1.57	0.51
1:F:189:MET:HA	1:F:192:ASN:HD22	1.74	0.51
1:F:359:LEU:O	1:F:363:ILE:HG12	2.09	0.51
1:F:450:SER:N	1:F:453:MET:SD	2.84	0.51
1:F:880:MET:HG2	1:F:3934:THR:HB	1.92	0.51
1:F:1096:VAL:O	1:F:1100:VAL:HG13	2.09	0.51
1:F:1686:LEU:HB3	1:F:1738:ASN:HB3	1.92	0.51
1:F:2158:ARG:C	1:F:2160:TYR:H	2.14	0.51
1:F:2251:ILE:HB	1:F:2253:TYR:CZ	2.46	0.51
1:F:2553:HIS:O	1:F:2556:SER:OG	2.21	0.51
1:F:3131:SER:O	1:F:3135:LEU:HG	2.10	0.51
2:L:143:HIS:HA	2:L:146:LYS:HE2	1.93	0.51
2:N:169:LYS:HB3	2:O:169:LYS:HB2	1.92	0.51
3:P:675:LYS:O	3:P:679:GLU:HG3	2.11	0.51
3:P:763:ASP:HB2	3:P:777:VAL:HG21	1.92	0.51
4:Q:146:LEU:HB3	4:R:150:VAL:HG21	1.91	0.51
1:A:103:TYR:O	1:A:107:ILE:HG12	2.11	0.51
1:A:1630:ASP:HA	1:A:1633:TRP:NE1	2.26	0.51
1:A:2313:LYS:HA	1:A:2316:TYR:CE2	2.45	0.51
1:A:3321:LEU:HD13	1:A:3324:ARG:NH1	2.25	0.51
1:F:716:VAL:HA	1:F:719:LYS:HZ1	1.75	0.51
1:F:1293:ALA:HA	1:F:1296:PHE:HB2	1.91	0.51
1:F:3736:LYS:HB2	1:F:3752:VAL:HB	1.91	0.51
2:K:32:PHE:H	2:K:47:VAL:HB	1.75	0.51
2:L:124:ARG:HA	2:L:127:ILE:HD12	1.93	0.51
2:L:160:GLY:O	2:L:164:LYS:HD3	2.11	0.51
2:O:62:GLU:HB2	2:O:65:LYS:HG2	1.93	0.51
4:Q:43:GLN:HE22	4:Q:124:MET:HG2	1.75	0.51
4:R:138:PRO:O	4:R:142:MET:CB	2.58	0.51
10:I:27:DC:H2''	11:J:31:DT:C4	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:36:ARG:HD3	1:A:2426:HIS:HB2	1.92	0.51
1:A:207:GLN:CD	1:A:220:LEU:HD23	2.31	0.51
1:A:718:MET:HA	1:A:721:TYR:CD2	2.45	0.51
1:A:1354:GLU:HB3	1:A:1357:LYS:HD2	1.92	0.51
1:A:1428:ILE:HA	1:A:1431:LEU:HB2	1.93	0.51
1:A:1761:LEU:O	1:A:1765:VAL:HG23	2.11	0.51
1:A:1913:LYS:HA	1:A:1916:ILE:HD12	1.93	0.51
1:A:3335:ARG:HG2	1:A:3339:ASN:HD21	1.76	0.51
1:F:461:ILE:O	1:F:464:VAL:HG22	2.11	0.51
1:F:1527:ARG:O	1:F:1530:SER:OG	2.23	0.51
1:F:1675:TYR:O	1:F:1679:LEU:HG	2.11	0.51
1:F:1725:GLN:HG3	1:F:1728:GLU:H	1.75	0.51
1:F:1935:GLU:O	1:F:1939:LEU:HG	2.10	0.51
1:F:3236:PHE:HB3	1:F:3272:TRP:CZ3	2.45	0.51
1:F:3968:ILE:HD13	1:F:3976:GLU:HG3	1.91	0.51
2:N:20:LEU:HD13	2:N:74:LEU:HB3	1.92	0.51
1:A:168:ASP:HB2	1:A:170:VAL:HG22	1.93	0.51
1:A:864:GLY:O	1:A:868:LYS:HG2	2.10	0.51
1:A:1071:ASN:HB3	1:A:1074:LYS:HD2	1.93	0.51
1:A:1454:ALA:O	1:A:1458:LEU:HG	2.11	0.51
1:A:1697:PRO:HG3	1:A:1749:ALA:O	2.11	0.51
1:A:3122:HIS:O	1:A:3126:LEU:HG	2.11	0.51
1:F:103:TYR:HA	1:F:106:GLU:CD	2.30	0.51
1:F:411:PRO:O	1:F:415:GLN:HG3	2.10	0.51
1:F:489:ARG:O	1:F:492:SER:OG	2.27	0.51
1:F:1538:LEU:HD13	1:F:1553:PHE:CZ	2.44	0.51
1:F:2120:ARG:HH12	1:F:2160:TYR:HB2	1.75	0.51
1:F:2233:HIS:CE1	1:F:2237:ILE:HD11	2.46	0.51
4:Q:77:ASP:OD1	4:Q:81:ARG:NH1	2.44	0.51
1:A:949:PRO:HG3	1:F:2580:PRO:HG2	1.92	0.51
1:A:1411:TYR:O	1:A:1414:ILE:HB	2.11	0.51
1:A:1844:VAL:O	1:A:1848:ILE:HG13	2.10	0.51
1:A:3967:PHE:O	1:A:3970:LEU:HD22	2.11	0.51
1:A:4102:THR:HA	1:A:4105:LYS:HE3	1.92	0.51
1:F:785:MET:HB3	1:F:789:TYR:CE1	2.46	0.51
1:F:1751:GLU:HG3	1:F:1784:ARG:CZ	2.41	0.51
1:F:2553:HIS:O	1:F:2557:LEU:HG	2.11	0.51
1:F:3483:MET:HA	1:F:3486:GLU:HB2	1.93	0.51
1:F:4014:LYS:NZ	1:F:4015:ASN:OD1	2.31	0.51
2:K:175:ASP:OD1	2:K:176:LEU:N	2.44	0.51
2:L:177:TYR:CG	3:M:796:ILE:HG12	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:675:LYS:HA	3:M:678:LEU:HD12	1.91	0.51
3:M:721:VAL:HG22	3:M:743:MET:HG3	1.92	0.51
3:M:821:ASP:OD2	3:M:871:ARG:NH1	2.44	0.51
2:N:150:ARG:O	2:N:153:ARG:HG3	2.10	0.51
1:A:63:PHE:CE2	1:A:85:ILE:HG12	2.46	0.51
1:A:63:PHE:HE2	1:A:85:ILE:HG12	1.76	0.51
1:A:998:ASN:OD1	1:A:999:LYS:N	2.44	0.51
1:A:2133:LEU:HD23	1:A:2164:TRP:CZ3	2.46	0.51
1:A:2392:VAL:O	1:A:2396:LEU:HG	2.11	0.51
1:A:3348:LEU:O	1:A:3352:GLU:N	2.39	0.51
1:F:432:THR:OG1	1:F:433:PRO:HD3	2.10	0.51
1:F:774:GLU:O	1:F:778:ILE:HG12	2.11	0.51
1:F:1131:ILE:HA	1:F:1134:LEU:HD12	1.93	0.51
1:F:1264:LEU:HD23	1:F:1340:ARG:HG3	1.93	0.51
1:F:2097:LEU:HA	1:F:2100:LEU:HD12	1.91	0.51
4:Q:33:GLY:HA2	4:Q:73:LEU:HD22	1.92	0.51
4:R:4:LEU:HD23	4:R:30:THR:HG21	1.92	0.51
8:D:13:DC:O3'	8:D:14:DA:H2'	2.11	0.51
1:A:341:PHE:HD2	1:A:369:PHE:HD1	1.57	0.51
1:A:1580:LEU:HD13	1:A:1625:HIS:CG	2.45	0.51
1:A:1913:LYS:O	1:A:1917:LYS:HG2	2.11	0.51
1:A:2412:TYR:CZ	1:A:2450:GLU:HB3	2.46	0.51
1:A:3227:ILE:HA	1:A:3230:LEU:HD12	1.93	0.51
1:A:3894:PRO:O	1:A:3898:LEU:HG	2.11	0.51
1:A:4041:ARG:HA	1:A:4044:ILE:HG12	1.93	0.51
1:F:1200:GLY:O	1:F:1202:ARG:NH1	2.44	0.51
1:F:2158:ARG:HE	1:F:2199:LEU:HG	1.76	0.51
1:F:2749:ALA:HB1	1:F:2753:ARG:HH12	1.75	0.51
1:F:2797:VAL:HA	1:F:2800:ARG:HB3	1.93	0.51
1:F:3413:TYR:HD2	1:F:3453:ALA:HB2	1.76	0.51
1:F:3548:GLY:O	1:F:3552:LYS:NZ	2.39	0.51
3:M:875:PHE:CD2	3:M:888:ILE:HG23	2.46	0.51
2:O:32:PHE:CE1	2:O:70:LEU:HD11	2.46	0.51
8:D:18:DA:H2''	8:D:19:DA:N7	2.25	0.51
1:A:479:ILE:HA	1:A:482:VAL:HG22	1.94	0.50
1:A:1689:LYS:O	1:A:1693:VAL:HG23	2.11	0.50
1:A:3073:LEU:HD12	1:A:3074:GLN:N	2.25	0.50
1:A:3947:GLY:O	1:A:3950:THR:OG1	2.24	0.50
1:A:4086:ASP:N	1:A:4086:ASP:OD1	2.44	0.50
1:F:1327:GLY:HA2	1:F:1330:TYR:HB3	1.92	0.50
1:F:2510:LEU:HD21	1:F:2525:TRP:CD1	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2954:GLN:NE2	1:F:2954:GLN:O	2.44	0.50
1:F:3962:ARG:NH1	1:F:4124:TRP:O	2.37	0.50
2:L:8:ILE:HD13	2:L:86:PHE:CD2	2.46	0.50
3:P:819:TYR:HB2	3:P:860:VAL:HG11	1.92	0.50
8:D:21:DA:N6	9:E:36:DA:H61	2.08	0.50
1:A:181:LEU:HD13	1:A:234:PHE:CE2	2.45	0.50
1:A:573:LEU:HD22	1:A:649:PHE:HD1	1.76	0.50
1:A:1199:PRO:HA	1:A:1202:ARG:HH11	1.76	0.50
1:A:1610:ASN:OD1	1:A:1611:GLN:N	2.38	0.50
1:A:2234:ASN:HA	1:A:2237:ILE:HD12	1.93	0.50
1:A:2825:THR:O	1:A:2829:LYS:HG3	2.10	0.50
1:A:4012:ASP:HB2	1:A:4038:TRP:CH2	2.46	0.50
1:F:67:VAL:O	1:F:82:ARG:NH2	2.44	0.50
1:F:2231:PHE:O	1:F:2235:LEU:HG	2.11	0.50
1:F:2356:MET:HG2	1:F:2358:ASP:H	1.77	0.50
1:F:3266:SER:HA	1:F:3272:TRP:CD1	2.47	0.50
1:F:3348:LEU:HA	1:F:3351:ILE:HD12	1.93	0.50
1:F:3443:PRO:HA	1:F:3446:VAL:HG22	1.93	0.50
2:N:95:PHE:HB2	2:N:113:LEU:HD11	1.92	0.50
4:Q:1:MET:HE3	4:Q:3:GLU:HG3	1.93	0.50
4:Q:36:LEU:O	4:Q:47:GLU:HB3	2.10	0.50
1:A:106:GLU:O	1:A:110:THR:HG23	2.11	0.50
1:A:2347:LYS:O	1:A:2351:GLN:N	2.26	0.50
1:A:2427:ARG:HE	1:A:2432:GLN:HG3	1.76	0.50
1:F:1750:LEU:HD22	1:F:1762:MET:HG3	1.94	0.50
1:F:2973:ASP:OD1	1:F:2977:ASN:ND2	2.43	0.50
2:K:130:CYS:HB2	2:L:130:CYS:HB2	1.93	0.50
2:N:45:GLY:HA3	2:N:113:LEU:HD23	1.94	0.50
2:N:130:CYS:HB3	2:O:130:CYS:HB3	1.93	0.50
3:P:813:PHE:H	3:P:849:GLY:N	2.09	0.50
4:Q:294:PRO:HA	4:Q:298:PHE:HB2	1.94	0.50
1:A:82:ARG:O	1:A:86:LEU:HG	2.11	0.50
1:A:860:GLY:HA3	1:A:3136:THR:OG1	2.12	0.50
1:A:1047:GLN:O	1:A:1051:LYS:HG2	2.10	0.50
1:A:1603:GLN:OE1	1:A:1606:ARG:NH2	2.44	0.50
1:A:2866:ALA:HA	1:A:2869:LEU:HG	1.92	0.50
1:F:23:ASP:N	1:F:23:ASP:OD1	2.44	0.50
1:F:65:LEU:O	1:F:69:VAL:HG22	2.12	0.50
1:F:484:HIS:O	1:F:488:ILE:HG12	2.11	0.50
1:F:1767:CYS:HB3	1:F:1819:PHE:HA	1.92	0.50
1:F:3046:ARG:O	1:F:3050:LYS:HG2	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3259:LEU:O	1:F:3276:TRP:NE1	2.35	0.50
1:F:3389:VAL:HG13	1:F:3413:TYR:HE1	1.76	0.50
1:F:3462:ARG:HB3	1:F:3498:TRP:CH2	2.47	0.50
1:F:3580:ASN:HB3	1:F:3582:GLU:OE1	2.12	0.50
2:K:89:SER:HB2	2:K:91:GLU:HG2	1.93	0.50
2:L:137:ASN:O	2:L:141:ASN:ND2	2.44	0.50
2:N:8:ILE:HD11	2:N:18:HIS:HB2	1.92	0.50
2:O:66:TYR:OH	2:O:109:GLY:HA2	2.11	0.50
3:P:858:GLU:HG3	3:P:883:LYS:HD3	1.92	0.50
4:Q:25:ALA:HA	4:Q:38:VAL:HA	1.92	0.50
1:A:29:LEU:HA	1:A:32:HIS:HD1	1.77	0.50
1:A:2824:LYS:O	1:A:2829:LYS:NZ	2.30	0.50
1:A:3192:LYS:HB3	1:A:3196:LYS:HZ2	1.76	0.50
1:A:3981:TYR:OH	1:A:4101:GLU:HB2	2.11	0.50
1:F:1783:ARG:HE	1:F:1830:HIS:HB2	1.76	0.50
1:F:3156:PRO:O	1:F:3160:LEU:N	2.45	0.50
3:M:739:GLN:HB3	3:M:741:ARG:HH11	1.77	0.50
3:M:791:GLU:O	3:M:794:SER:OG	2.21	0.50
3:M:889:LEU:HD13	3:M:893:TRP:CE2	2.47	0.50
2:N:18:HIS:NE2	2:N:36:LEU:HD13	2.27	0.50
2:O:11:VAL:N	2:O:88:PHE:O	2.44	0.50
1:A:535:LEU:O	1:A:637:LYS:NZ	2.39	0.50
1:A:639:ALA:HA	1:A:642:PHE:HB3	1.93	0.50
1:A:923:ASP:O	1:A:926:THR:N	2.45	0.50
1:A:1184:ARG:NH2	1:A:1265:GLU:OE1	2.41	0.50
1:A:1289:SER:HA	1:A:1292:LYS:HE3	1.93	0.50
1:A:1708:GLU:OE2	1:A:1712:ARG:NE	2.43	0.50
1:A:2153:THR:O	1:A:2156:VAL:HG12	2.11	0.50
1:A:3581:PRO:HB3	1:A:3629:ARG:HE	1.77	0.50
1:F:895:ALA:HA	1:F:904:VAL:HA	1.94	0.50
1:F:1829:TRP:HA	1:F:1883:ARG:HH22	1.76	0.50
1:F:2518:GLN:HG3	1:F:2522:ARG:NH1	2.26	0.50
1:F:3722:PHE:HB3	1:F:3724:GLU:OE2	2.12	0.50
1:F:3924:HIS:H	1:F:3927:ASN:ND2	2.10	0.50
2:K:161:ARG:HH11	2:K:164:LYS:HE2	1.77	0.50
2:N:188:LYS:HG3	2:O:187:LYS:NZ	2.27	0.50
2:O:104:VAL:HG13	2:O:106:PHE:CE2	2.45	0.50
3:P:813:PHE:HA	3:P:850:ALA:HB3	1.94	0.50
3:P:843:LEU:HD22	3:P:846:ARG:NH2	2.27	0.50
4:Q:102:ASP:HA	4:Q:126:ALA:HB2	1.94	0.50
1:A:13:LEU:O	1:A:16:GLN:HG3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:451:PRO:O	1:A:455:LEU:HG	2.12	0.50
1:A:460:ALA:O	1:A:464:VAL:HG13	2.12	0.50
1:A:524:TYR:HD2	1:A:629:PHE:HD2	1.59	0.50
1:A:1249:SER:OG	1:A:1250:LEU:N	2.44	0.50
1:A:1791:CYS:SG	1:A:1834:ASP:HB3	2.52	0.50
1:A:2197:THR:HG21	1:A:2244:CYS:HB2	1.93	0.50
1:A:2382:VAL:O	1:A:2386:LEU:HG	2.12	0.50
1:A:3467:ARG:HD2	1:A:4000:ASN:HD21	1.76	0.50
1:F:655:LEU:HB3	1:F:659:ARG:NH1	2.26	0.50
1:F:655:LEU:O	1:F:658:THR:OG1	2.27	0.50
1:F:1504:ASP:O	1:F:1508:LYS:N	2.43	0.50
1:F:1834:ASP:O	1:F:1838:GLU:HG3	2.11	0.50
1:F:2392:VAL:O	1:F:2396:LEU:HG	2.12	0.50
1:F:3717:VAL:HG23	1:F:3744:ASP:H	1.77	0.50
1:F:3775:LEU:O	1:F:3782:SER:OG	2.29	0.50
2:K:55:GLU:HG2	2:K:111:PHE:CD2	2.46	0.50
4:R:194:MET:HA	4:R:198:LEU:HB2	1.94	0.50
1:A:28:ALA:O	1:A:32:HIS:ND1	2.43	0.50
1:A:240:GLU:OE1	1:A:240:GLU:N	2.80	0.50
1:A:542:ASP:OD1	1:A:543:SER:N	2.44	0.50
1:A:965:THR:O	1:A:969:LEU:HG	2.11	0.50
1:A:1300:SER:O	1:A:1334:LYS:NZ	2.45	0.50
1:A:1626:TRP:CD1	1:A:1627:LYS:HE3	2.46	0.50
1:A:2372:PRO:O	1:A:2374:LEU:N	2.39	0.50
1:A:3289:ARG:HG3	1:A:3290:SER:H	1.77	0.50
1:A:3578:LEU:HD21	1:A:3681:LYS:HD2	1.92	0.50
1:F:286:LEU:HD12	1:F:319:PHE:CE1	2.47	0.50
1:F:409:GLN:NE2	1:F:410:MET:SD	2.85	0.50
1:F:1048:GLN:OE1	1:F:1051:LYS:NZ	2.40	0.50
1:F:1081:ALA:O	1:F:1085:ILE:HG23	2.12	0.50
1:F:3226:ASP:O	1:F:3230:LEU:HG	2.12	0.50
1:F:3326:GLN:NE2	1:F:3326:GLN:O	2.45	0.50
1:F:3472:ILE:HA	1:F:3479:THR:HG21	1.93	0.50
1:F:3814:ASP:O	1:F:3818:ASN:N	2.35	0.50
1:F:3869:THR:O	1:F:3873:LYS:HG3	2.12	0.50
2:K:151:LEU:HD12	2:L:152:LEU:HA	1.93	0.50
4:R:208:LYS:HB2	4:R:209:PRO:HD3	1.94	0.50
8:D:15:DA:H2	9:E:44:DG:N1	2.09	0.50
10:I:27:DC:H2'	11:J:30:DT:C6	2.47	0.50
1:A:1102:GLU:H	1:A:1102:GLU:CD	2.15	0.50
1:A:1145:LEU:O	1:A:1165:LEU:N	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2796:ALA:O	1:A:2800:ARG:HG2	2.12	0.50
1:A:3296:GLN:HG3	1:A:3337:ILE:HD11	1.92	0.50
1:F:539:GLN:N	1:F:539:GLN:OE1	2.45	0.50
1:F:968:VAL:N	1:F:971:ARG:HH21	2.10	0.50
1:F:1373:VAL:O	1:F:1377:CYS:N	2.32	0.50
1:F:1558:TYR:O	1:F:1561:SER:OG	2.21	0.50
1:F:1626:TRP:CZ2	1:F:1633:TRP:HB3	2.47	0.50
1:F:1733:THR:HG23	1:F:1736:PHE:H	1.77	0.50
1:F:2406:GLU:OE1	1:F:2406:GLU:N	2.31	0.50
1:A:125:ILE:HA	1:A:128:LEU:HD13	1.93	0.49
1:A:635:PRO:HB3	1:A:672:ILE:HD11	1.94	0.49
1:A:1400:VAL:HG13	1:A:1461:ALA:HB2	1.94	0.49
1:A:1775:GLU:O	1:A:1778:PHE:HB3	2.12	0.49
1:A:2405:VAL:HA	1:A:2408:MET:CE	2.42	0.49
1:A:2760:GLU:O	1:A:2764:LYS:HG3	2.12	0.49
1:A:3287:ARG:CZ	1:A:3289:ARG:HH22	2.24	0.49
1:A:3492:CYS:SG	1:A:3494:GLN:NE2	2.85	0.49
1:F:53:LEU:O	1:F:57:LEU:HG	2.12	0.49
1:F:3007:GLU:O	1:F:3010:SER:HB3	2.12	0.49
1:F:3123:GLN:HG2	1:F:3124:SER:N	2.27	0.49
1:F:3470:GLN:O	1:F:3474:ARG:HG2	2.11	0.49
2:K:195:HIS:HB2	2:L:194:LEU:HD21	1.94	0.49
3:M:660:GLU:HG2	3:M:686:GLY:HA3	1.92	0.49
3:M:892:SER:HA	3:M:895:THR:OG1	2.12	0.49
2:N:29:GLU:HG2	2:N:66:TYR:HD2	1.76	0.49
4:R:45:TRP:HB3	4:R:103:ALA:HA	1.93	0.49
9:E:32:DA:N3	9:E:33:DA:H3'	2.27	0.49
1:A:864:GLY:N	1:A:3169:PRO:HA	2.21	0.49
1:A:924:ARG:HH21	1:A:2768:GLN:HA	1.76	0.49
1:A:1228:GLY:HA2	1:A:1233:SER:HB2	1.94	0.49
1:A:2824:LYS:HD2	1:A:2828:GLU:HG2	1.95	0.49
1:A:3416:LEU:HD23	1:A:3449:LYS:HD2	1.94	0.49
1:A:4100:GLU:O	1:A:4104:VAL:HG13	2.12	0.49
1:F:1477:HIS:HB3	1:F:1481:THR:HG23	1.94	0.49
1:F:2452:ARG:HE	1:F:2497:GLU:CD	2.14	0.49
2:L:22:VAL:HG11	2:L:74:LEU:HD13	1.93	0.49
2:N:141:ASN:HD21	2:O:140:LYS:HD3	1.78	0.49
2:N:161:ARG:HA	2:N:164:LYS:HD2	1.94	0.49
4:Q:193:PHE:HD1	4:Q:197:LYS:HE2	1.77	0.49
8:D:23:DT:H2'	8:D:24:DT:C2	2.47	0.49
1:A:1099:PHE:CE1	1:A:1152:ARG:HG3	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1674:THR:O	1:A:1678:LEU:HG	2.12	0.49
1:A:1948:ALA:O	1:A:1952:ILE:HG12	2.12	0.49
1:A:2478:MET:HG2	1:A:2524:PHE:CE1	2.47	0.49
1:A:2742:MET:O	1:A:2746:LYS:HG2	2.12	0.49
1:F:230:LEU:HA	1:F:233:ASN:OD1	2.13	0.49
1:F:406:ARG:NH2	1:F:408:TYR:HB2	2.27	0.49
1:F:1558:TYR:O	1:F:1562:LEU:HG	2.12	0.49
1:F:2153:THR:O	1:F:2156:VAL:HG12	2.12	0.49
1:F:3051:LEU:HA	1:F:3054:GLN:NE2	2.26	0.49
1:F:3335:ARG:O	1:F:3339:ASN:ND2	2.46	0.49
1:F:3449:LYS:HG2	1:F:3452:LYS:NZ	2.27	0.49
2:K:99:LYS:HD3	4:R:115:LEU:HD21	1.93	0.49
2:L:86:PHE:HA	2:L:97:PHE:HB3	1.93	0.49
3:M:754:PHE:HA	3:M:758:TYR:HD2	1.78	0.49
2:N:24:TRP:HA	2:N:32:PHE:HB3	1.94	0.49
9:E:41:DT:H2''	9:E:42:DA:H5'	1.94	0.49
1:A:738:HIS:NE2	1:A:739:ASN:OD1	2.46	0.49
1:A:1182:GLU:OE2	1:A:1185:HIS:ND1	2.46	0.49
1:A:1484:LEU:HD22	1:A:1527:ARG:HH21	1.76	0.49
1:F:1164:CYS:N	1:F:1167:ASP:OD2	2.43	0.49
1:F:1843:ILE:HB	1:F:1846:ASP:HB3	1.93	0.49
1:F:2589:TYR:HB2	1:F:2777:HIS:HB2	1.93	0.49
1:F:3666:LEU:HA	1:F:3669:LYS:NZ	2.27	0.49
1:F:3925:LEU:HD13	1:F:3962:ARG:HH21	1.76	0.49
1:F:3964:THR:H	1:F:3967:PHE:HD2	1.61	0.49
2:K:22:VAL:HA	2:K:34:ILE:HA	1.93	0.49
2:K:59:MET:HE1	2:K:97:PHE:HE2	1.78	0.49
3:M:716:ASN:HA	3:M:745:HIS:NE2	2.27	0.49
8:D:35:DT:H2'	8:D:36:DG:C8	2.47	0.49
11:J:20:DT:C2	11:J:21:DA:C8	3.00	0.49
1:A:192:ASN:O	1:A:196:LEU:HG	2.12	0.49
1:A:1070:PRO:HG2	1:A:3715:TYR:HD2	1.76	0.49
1:A:2310:VAL:HG13	1:A:2316:TYR:HE2	1.77	0.49
1:A:2925:GLU:O	1:A:2928:LYS:HG2	2.13	0.49
1:A:3918:LEU:HB2	1:A:3920:ILE:HG12	1.94	0.49
1:F:460:ALA:O	1:F:464:VAL:HG13	2.13	0.49
1:F:719:LYS:O	1:F:1023:SER:HB3	2.12	0.49
1:F:1086:TYR:CZ	1:F:1133:HIS:HB3	2.48	0.49
1:F:1359:LEU:O	1:F:1362:ASP:HB2	2.13	0.49
1:F:1590:THR:HG21	1:F:1641:THR:HG23	1.94	0.49
1:F:1620:THR:HG22	1:F:1624:GLN:NE2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2150:VAL:HA	1:F:2153:THR:OG1	2.11	0.49
1:F:2970:LYS:NZ	1:F:2971:GLN:HE22	2.09	0.49
1:F:3254:LEU:HG	1:F:3283:LEU:HD11	1.93	0.49
1:F:3454:LEU:HG	1:F:3490:VAL:HG21	1.93	0.49
1:F:3767:LEU:HA	1:F:3770:VAL:HG22	1.94	0.49
2:N:179:ARG:HB3	3:P:805:TRP:CE2	2.47	0.49
2:O:156:ASN:O	2:O:159:GLN:HG2	2.11	0.49
3:P:818:VAL:HA	3:P:862:HIS:HB2	1.95	0.49
3:P:843:LEU:HD22	3:P:846:ARG:HH21	1.77	0.49
1:A:78:PHE:HB2	1:A:79:ARG:NH1	2.27	0.49
1:A:342:MET:HE2	1:A:345:PHE:HD2	1.78	0.49
1:A:583:LEU:HA	1:A:614:PRO:HA	1.94	0.49
1:A:710:PHE:O	1:A:714:VAL:HG23	2.13	0.49
1:A:899:ARG:CZ	1:A:2568:MET:HB2	2.43	0.49
1:A:1297:PHE:HD1	1:A:1301:ILE:HG13	1.78	0.49
1:A:2138:VAL:HG13	1:A:2143:ARG:HB3	1.94	0.49
1:A:2562:LEU:O	1:A:2566:THR:OG1	2.30	0.49
1:A:3264:LYS:O	1:A:3267:LYS:NZ	2.28	0.49
1:A:3334:TYR:CE2	1:A:3384:HIS:HE1	2.29	0.49
1:A:3643:HIS:HB3	1:A:3659:PHE:HZ	1.78	0.49
1:A:3820:MET:SD	1:A:3825:LYS:HB2	2.52	0.49
1:F:288:ASP:N	1:F:288:ASP:OD1	2.46	0.49
1:F:3382:PHE:HB2	1:F:3419:PHE:CE2	2.47	0.49
1:F:3492:CYS:HB3	1:F:3709:GLY:O	2.12	0.49
1:F:3880:ALA:HB1	1:F:3969:ASN:HD21	1.77	0.49
2:L:119:PRO:O	2:L:123:ILE:HG12	2.13	0.49
3:M:827:ASN:HD21	3:M:856:LEU:HB2	1.77	0.49
2:N:66:TYR:OH	2:N:109:GLY:HA3	2.13	0.49
2:N:88:PHE:CD2	2:N:90:LYS:HG2	2.48	0.49
2:O:190:LYS:HE3	2:O:194:LEU:HD11	1.95	0.49
4:Q:13:TRP:CE3	4:Q:24:LEU:HG	2.48	0.49
9:E:33:DA:H5'	9:E:34:DC:N3	2.27	0.49
10:I:36:DA:H2	11:J:22:DG:N1	2.07	0.49
10:I:45:DG:N2	11:J:14:DT:H1'	2.27	0.49
1:A:194:GLU:O	1:A:198:ARG:HG3	2.13	0.49
1:A:1871:MET:CE	1:A:1940:TYR:HA	2.43	0.49
1:A:2528:GLU:OE1	1:A:2528:GLU:N	2.41	0.49
1:A:2833:THR:O	1:A:2837:LEU:HD23	2.12	0.49
1:F:1570:GLU:HG3	1:F:1571:LEU:HD22	1.95	0.49
1:F:1773:VAL:O	1:F:1773:VAL:HG12	2.12	0.49
1:F:2228:ARG:HH21	10:I:45:DG:H4'	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2825:THR:HG22	1:F:2828:GLU:CD	2.32	0.49
1:F:3120:LEU:O	1:F:3122:HIS:ND1	2.46	0.49
2:K:127:ILE:HG23	2:L:19:PHE:HE2	1.76	0.49
3:M:770:ASP:H	3:M:773:GLN:HB2	1.77	0.49
3:P:813:PHE:N	3:P:850:ALA:N	2.61	0.49
1:A:188:GLU:HG2	1:A:189:MET:H	1.78	0.49
1:A:450:SER:O	1:A:454:GLN:HG3	2.12	0.49
1:A:1251:GLN:CD	1:A:1251:GLN:H	2.16	0.49
1:A:1452:VAL:HG13	1:A:1517:LEU:HD11	1.95	0.49
1:A:1506:SER:O	1:A:1509:GLN:NE2	2.46	0.49
1:A:2880:CYS:O	1:A:2885:GLN:N	2.44	0.49
1:A:3909:ALA:HB2	1:A:3980:MET:SD	2.53	0.49
1:A:3911:ILE:HD12	1:A:3937:VAL:HG13	1.95	0.49
1:A:3928:PHE:HD1	1:A:3939:GLY:HA2	1.76	0.49
1:F:888:ARG:HB3	1:F:3889:ARG:HE	1.77	0.49
1:F:1413:ASP:OD1	1:F:1414:ILE:N	2.46	0.49
1:F:2801:ASP:OD2	1:F:2804:ILE:N	2.24	0.49
1:F:2981:TRP:CD1	1:F:2985:GLU:HG2	2.40	0.49
1:F:3029:LYS:NZ	1:F:3067:LYS:O	2.40	0.49
1:F:3179:TRP:HB3	1:F:3242:MET:SD	2.52	0.49
1:F:3444:ALA:HB1	1:F:3482:LEU:HD21	1.95	0.49
1:F:3476:PRO:HA	1:F:3479:THR:OG1	2.13	0.49
1:F:3870:SER:HA	1:F:3873:LYS:HE2	1.95	0.49
2:L:6:SER:HB2	2:L:8:ILE:HG23	1.95	0.49
2:O:28:LEU:O	2:O:32:PHE:HB3	2.12	0.49
2:O:94:TYR:CE1	2:O:111:PHE:HB2	2.30	0.49
3:P:787:GLN:HE21	3:P:792:MET:HB3	1.77	0.49
1:A:135:LEU:HD21	1:A:177:LEU:HA	1.95	0.49
1:A:240:GLU:H	1:A:240:GLU:CD	3.54	0.49
1:A:1225:GLU:O	1:A:1230:GLY:N	2.45	0.49
1:A:1397:ASP:HA	1:A:1460:ARG:HH22	1.78	0.49
1:A:1762:MET:HG3	1:A:1778:PHE:HE1	1.78	0.49
1:A:1922:ALA:HB1	1:A:1940:TYR:CE1	2.47	0.49
1:A:2386:LEU:HD12	1:A:2418:LYS:HG3	1.94	0.49
1:F:1407:LYS:NZ	1:F:1461:ALA:O	2.27	0.49
1:F:2348:GLN:OE1	1:F:2353:GLN:NE2	2.45	0.49
1:F:3463:LEU:O	1:F:3466:PRO:HD2	2.13	0.49
2:K:88:PHE:CD1	2:K:113:LEU:HD12	2.47	0.49
2:L:3:ARG:HH12	2:L:125:GLU:HB3	1.77	0.49
3:M:682:ILE:HG12	3:M:687:GLY:HA3	1.95	0.49
3:M:879:ARG:HG2	3:M:885:LYS:HA	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:O:43:TRP:HA	2:O:116:VAL:HG22	1.95	0.49
2:O:97:PHE:H	2:O:107:ARG:NH1	2.10	0.49
3:P:813:PHE:CA	3:P:850:ALA:H	2.25	0.49
8:D:27:DT:H2''	8:D:28:DA:N7	2.27	0.49
10:I:26:DA:H1'	10:I:27:DC:N1	2.28	0.49
1:A:135:LEU:O	1:A:139:ARG:HG2	2.12	0.49
1:A:217:LEU:O	1:A:218:PRO:C	2.51	0.49
1:A:248:ILE:O	1:A:252:VAL:HG23	2.12	0.49
1:A:1502:SER:OG	1:A:1503:LEU:N	2.45	0.49
1:A:1603:GLN:O	1:A:1603:GLN:NE2	2.46	0.49
1:A:1667:SER:OG	1:A:1670:GLU:OE1	2.28	0.49
1:A:2504:ASP:O	1:A:2508:GLN:HG2	2.12	0.49
1:A:2855:VAL:HG23	1:A:2885:GLN:HG3	1.94	0.49
1:A:3449:LYS:HA	1:A:3452:LYS:HD3	1.94	0.49
1:F:105:VAL:HA	1:F:108:LYS:HB3	1.95	0.49
1:F:865:GLN:HB3	1:F:3168:TYR:CD2	2.48	0.49
1:F:979:VAL:HA	1:F:982:GLN:HG2	1.95	0.49
1:F:1071:ASN:ND2	1:F:1074:LYS:HG3	2.26	0.49
1:F:1864:ASP:OD1	1:F:1864:ASP:N	2.44	0.49
1:F:2964:ASP:OD1	1:F:2965:TYR:N	2.45	0.49
1:F:3958:LEU:HD23	1:F:4081:ALA:HB2	1.95	0.49
1:F:4012:ASP:HB2	1:F:4038:TRP:CD2	2.48	0.49
3:M:786:GLU:OE1	3:M:786:GLU:N	2.46	0.49
4:Q:132:SER:HB3	4:R:44:VAL:HA	1.94	0.49
1:A:40:GLN:NE2	1:A:2427:ARG:O	2.45	0.48
1:A:70:ARG:HB3	1:A:71:LYS:NZ	2.28	0.48
1:A:335:LYS:HG3	1:A:336:ASN:H	1.78	0.48
1:A:718:MET:HA	1:A:721:TYR:CE2	2.49	0.48
1:A:762:TYR:CD2	1:A:764:PRO:HD2	2.48	0.48
1:A:1175:HIS:HA	1:A:1178:ARG:NE	2.28	0.48
1:A:1564:SER:O	1:A:1568:ASN:ND2	2.46	0.48
1:A:2386:LEU:HB2	1:A:2387:PRO:HD3	1.95	0.48
1:A:3452:LYS:O	1:A:3455:LYS:HB3	2.13	0.48
1:A:3953:LEU:HB3	1:A:3955:VAL:HG22	1.95	0.48
1:F:67:VAL:HG11	1:F:85:ILE:HD13	1.94	0.48
1:F:271:GLY:O	1:F:274:LEU:HB2	2.13	0.48
1:F:2167:PRO:O	1:F:2170:GLN:HG3	2.12	0.48
1:F:3007:GLU:HG2	1:F:3010:SER:H	1.79	0.48
1:F:3502:MET:O	1:F:3506:LEU:N	2.46	0.48
1:F:3614:TYR:CD1	1:F:3618:GLY:HA3	2.48	0.48
1:F:3730:ALA:HB2	1:F:3734:ARG:CZ	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3992:ARG:HH12	1:F:4053:GLY:N	2.11	0.48
1:F:3995:PRO:HG3	1:F:4051:LEU:HB3	1.95	0.48
2:K:172:LEU:HB2	3:M:810:LEU:HG	1.94	0.48
2:L:102:LYS:O	2:L:104:VAL:HG23	2.13	0.48
3:M:772:ASN:O	3:M:776:GLU:HG2	2.12	0.48
4:Q:35:ALA:HA	4:Q:48:GLN:HA	1.95	0.48
4:Q:161:ASP:OD1	4:Q:184:PHE:N	2.36	0.48
4:R:81:ARG:HH11	4:R:84:LEU:HA	1.78	0.48
4:R:166:ASP:HA	4:R:169:GLU:HG3	1.95	0.48
9:E:28:DT:C6	9:E:28:DT:H5'	2.48	0.48
10:I:27:DC:H1'	11:J:31:DT:C4	2.47	0.48
1:A:2154:GLU:HA	1:A:2157:PHE:CE1	2.48	0.48
1:A:2268:LYS:O	1:A:2271:SER:OG	2.20	0.48
1:A:3064:PHE:HA	1:A:3067:LYS:HE3	1.95	0.48
1:A:3581:PRO:HA	1:A:3584:LEU:HD13	1.95	0.48
1:F:385:TYR:O	1:F:389:ILE:HG12	2.13	0.48
1:F:1190:LEU:HA	1:F:1193:LYS:HG2	1.94	0.48
1:F:1264:LEU:HD11	1:F:1344:PHE:CG	2.48	0.48
1:F:2161:ALA:O	1:F:2165:LEU:N	2.46	0.48
1:F:2184:TYR:CZ	1:F:2734:ARG:HD2	2.48	0.48
1:F:3413:TYR:CD2	1:F:3453:ALA:HB2	2.48	0.48
2:L:4:LYS:HG2	2:L:22:VAL:HB	1.95	0.48
2:N:58:ASP:OD1	4:Q:62:ASN:ND2	2.45	0.48
2:N:84:TYR:CD1	2:N:97:PHE:HB2	2.48	0.48
4:Q:100:VAL:HG12	4:Q:102:ASP:H	1.77	0.48
1:A:394:GLN:NE2	1:A:1738:ASN:OD1	2.43	0.48
1:A:847:SER:O	1:A:851:ILE:HG12	2.13	0.48
1:A:953:GLN:H	1:A:956:PRO:HG3	1.78	0.48
1:A:1039:TRP:HA	1:A:1042:LYS:HD3	1.94	0.48
1:A:1136:ARG:O	1:A:1139:GLU:HG2	2.13	0.48
1:A:1805:PHE:CZ	1:A:1869:LYS:HA	2.40	0.48
1:A:3103:ILE:HD11	1:A:3135:LEU:HB3	1.95	0.48
1:A:3156:PRO:HA	1:A:3159:ARG:NE	2.28	0.48
1:F:114:VAL:HA	1:F:119:ARG:HH21	1.77	0.48
1:F:395:MET:HE2	1:F:410:MET:HG3	1.95	0.48
1:F:899:ARG:NH2	1:F:2566:THR:HA	2.26	0.48
1:F:2181:GLY:O	1:F:2184:TYR:HB2	2.13	0.48
1:F:2254:ARG:NE	1:F:2293:GLY:HA2	2.28	0.48
3:M:843:LEU:O	3:M:847:PHE:CB	2.61	0.48
3:M:865:ILE:HG13	3:M:871:ARG:HB2	1.95	0.48
3:P:826:ILE:O	3:P:827:ASN:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:Q:17:GLN:H	4:Q:83:LEU:HG	1.77	0.48
1:A:79:ARG:HH21	1:A:82:ARG:NE	2.11	0.48
1:A:671:SER:HB3	1:A:732:PHE:HA	1.95	0.48
1:A:1087:ARG:HA	1:A:1090:ARG:CZ	2.44	0.48
1:A:1340:ARG:HH21	1:A:1343:GLU:HG3	1.78	0.48
1:A:3751:LEU:HD23	1:A:3803:ILE:HD11	1.96	0.48
1:A:3880:ALA:HB2	1:A:3965:ARG:NH2	2.29	0.48
1:F:68:PHE:HD2	1:F:69:VAL:HG13	1.78	0.48
1:F:134:LEU:O	1:F:137:THR:OG1	2.27	0.48
1:F:745:VAL:HG23	1:F:746:ARG:HD2	1.95	0.48
1:F:1015:ASP:O	1:F:1019:ASP:HB3	2.12	0.48
1:F:2123:PRO:HA	1:F:2126:MET:SD	2.54	0.48
1:F:2452:ARG:HB2	1:F:2498:ILE:HD11	1.95	0.48
1:F:3090:TYR:O	1:F:3095:ASP:N	2.42	0.48
1:F:3727:THR:HB	1:F:3737:ARG:HB3	1.95	0.48
2:K:154:ASP:O	2:K:158:VAL:HG13	2.13	0.48
2:L:52:ILE:HD11	2:L:67:VAL:HA	1.94	0.48
2:O:8:ILE:HB	2:O:95:PHE:HE2	1.79	0.48
2:O:22:VAL:HG13	2:O:24:TRP:HZ3	1.78	0.48
4:Q:4:LEU:O	4:Q:8:LEU:HB2	2.14	0.48
4:R:26:LYS:HE3	4:R:37:LEU:HB3	1.95	0.48
1:A:678:LYS:NZ	1:A:735:SER:O	2.36	0.48
1:A:924:ARG:NH2	1:A:2767:ALA:O	2.46	0.48
1:A:1096:VAL:O	1:A:1100:VAL:HG13	2.14	0.48
1:A:1657:SER:OG	1:A:1660:SER:OG	2.25	0.48
1:A:1816:ARG:HA	1:A:1819:PHE:CE2	2.49	0.48
1:A:3151:LEU:HD13	1:A:3196:LYS:O	2.13	0.48
1:A:4101:GLU:HA	1:A:4104:VAL:HG22	1.96	0.48
1:F:712:LYS:NZ	1:F:744:ASP:HB3	2.28	0.48
1:F:793:LEU:HB3	1:F:870:LEU:HA	1.95	0.48
1:F:1019:ASP:OD1	1:F:1026:ARG:NE	2.47	0.48
1:F:1730:PRO:O	1:F:1733:THR:HG22	2.14	0.48
1:F:2971:GLN:O	1:F:2974:GLU:HG2	2.14	0.48
1:F:2974:GLU:O	1:F:2978:LYS:N	2.46	0.48
2:K:137:ASN:HA	2:K:140:LYS:HG2	1.94	0.48
2:L:179:ARG:HD3	3:M:778:PHE:CB	2.43	0.48
3:M:706:ASN:OD1	3:M:709:VAL:N	2.29	0.48
2:N:32:PHE:CZ	2:N:70:LEU:HD12	2.48	0.48
2:N:89:SER:O	2:N:93:CYS:N	2.46	0.48
4:Q:55:SER:O	4:Q:59:LYS:HD3	2.13	0.48
1:A:1058:SER:O	1:A:1062:ARG:HG2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2339:GLU:O	1:A:2343:GLU:HG2	2.14	0.48
1:A:2384:PHE:CE2	1:A:2388:LYS:HE3	2.48	0.48
1:A:2571:ASP:O	1:A:2787:HIS:ND1	2.46	0.48
1:A:3120:LEU:HD11	1:A:3895:GLU:HG2	1.94	0.48
1:A:3563:ASP:OD1	1:A:3563:ASP:N	2.46	0.48
1:A:3797:THR:N	1:A:3800:LEU:O	2.39	0.48
1:A:3869:THR:HG22	1:A:3873:LYS:HZ3	1.79	0.48
1:F:40:GLN:CD	1:F:2427:ARG:HB2	2.34	0.48
1:F:535:LEU:O	1:F:637:LYS:NZ	2.29	0.48
1:F:913:ARG:O	1:F:916:GLU:HG2	2.12	0.48
1:F:1047:GLN:HG3	1:F:1051:LYS:NZ	2.28	0.48
1:F:1332:TYR:O	1:F:1336:THR:OG1	2.27	0.48
1:F:1614:GLN:HA	1:F:1617:LYS:HE2	1.95	0.48
1:F:1711:ARG:CZ	1:F:1757:MET:HG2	2.43	0.48
1:F:2404:ARG:HB3	1:F:2407:GLY:HA3	1.95	0.48
1:F:2432:GLN:O	1:F:2436:LEU:HG	2.13	0.48
1:F:3034:PRO:HB2	1:F:3037:GLN:HG3	1.96	0.48
1:F:3448:GLU:HB2	1:F:3482:LEU:HD22	1.95	0.48
1:F:3530:VAL:HG23	1:F:3531:TYR:H	1.78	0.48
1:F:3763:ARG:HH12	1:F:4003:ASP:HA	1.78	0.48
2:K:87:ASN:HB2	2:K:96:PHE:CZ	2.48	0.48
2:N:58:ASP:HB3	2:N:106:PHE:CD2	2.48	0.48
2:O:31:GLY:N	2:O:52:ILE:HG21	2.27	0.48
8:D:20:DT:C6	8:D:20:DT:H5"	2.49	0.48
1:A:23:ASP:O	1:A:70:ARG:NH2	2.39	0.48
1:A:935:HIS:CD2	1:A:2773:ARG:HH22	2.32	0.48
1:A:1115:HIS:O	1:A:1119:LYS:NZ	2.31	0.48
1:A:1575:LEU:HD21	1:A:1617:LYS:HB3	1.96	0.48
1:A:3061:LEU:O	1:A:3065:ILE:HG12	2.14	0.48
1:A:3156:PRO:O	1:A:3160:LEU:HG	2.14	0.48
1:A:3354:ASP:N	1:A:3354:ASP:OD1	2.46	0.48
1:F:1558:TYR:CE2	1:F:1562:LEU:HD11	2.48	0.48
1:F:2968:ALA:HA	1:F:2971:GLN:HG2	1.96	0.48
1:F:3254:LEU:HB2	1:F:3256:MET:SD	2.53	0.48
1:F:3665:MET:HA	1:F:3668:LEU:HG	1.96	0.48
2:K:32:PHE:CZ	2:K:47:VAL:HG21	2.48	0.48
10:I:30:DA:C8	11:J:29:DG:N2	2.81	0.48
1:A:484:HIS:O	1:A:488:ILE:HG12	2.14	0.48
1:A:706:LEU:HD12	1:A:1388:ASP:HB2	1.96	0.48
1:A:3089:LEU:HD12	1:A:3093:GLN:HE22	1.78	0.48
1:A:3237:SER:O	1:A:3240:MET:HG3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:664:SER:O	1:F:668:LYS:HG3	2.14	0.48
1:F:762:TYR:CD2	1:F:765:LEU:HG	2.48	0.48
1:F:913:ARG:NE	1:F:917:LEU:HD11	2.28	0.48
1:F:1149:LYS:HB3	1:F:1151:ARG:CZ	2.44	0.48
1:F:2238:ILE:O	1:F:2241:LEU:HG	2.14	0.48
1:F:2313:LYS:HA	1:F:2316:TYR:CZ	2.49	0.48
1:F:2477:LEU:HA	1:F:2480:ILE:HD12	1.95	0.48
1:F:2746:LYS:O	1:F:2750:GLU:HG2	2.13	0.48
1:F:3781:CYS:HB2	1:F:3786:LEU:HB2	1.95	0.48
1:F:4054:ALA:H	1:F:4103:GLN:NE2	2.12	0.48
3:M:837:ARG:HB2	3:M:840:ILE:HB	1.96	0.48
2:N:3:ARG:CZ	2:N:21:GLN:HG2	2.44	0.48
2:N:70:LEU:O	2:N:74:LEU:HG	2.14	0.48
2:O:58:ASP:OD1	2:O:58:ASP:N	2.44	0.48
3:P:665:CYS:HB2	3:P:697:THR:HG21	1.96	0.48
3:P:670:THR:HA	3:P:673:GLN:O	2.14	0.48
11:J:19:DA:H2''	11:J:20:DT:H5''	1.96	0.48
1:A:188:GLU:HG2	1:A:189:MET:N	2.28	0.48
1:A:1004:GLN:HG2	1:A:1005:ASP:N	2.29	0.48
1:A:1353:PRO:HD2	1:A:1356:TRP:CZ3	2.49	0.48
1:A:2317:ALA:O	1:A:2366:LYS:NZ	2.47	0.48
1:A:2409:THR:OG1	1:A:2410:GLU:N	2.46	0.48
1:A:2865:HIS:HB2	1:A:2868:LEU:HD23	1.95	0.48
1:A:2991:LYS:HA	1:A:2994:TRP:CE3	2.49	0.48
1:A:3087:SER:O	1:A:3091:LEU:HG	2.13	0.48
1:A:4011:PHE:O	1:A:4015:ASN:ND2	2.29	0.48
1:F:35:ILE:HG23	1:F:36:ARG:HE	1.79	0.48
1:F:76:ILE:HA	1:F:79:ARG:CG	2.43	0.48
1:F:243:GLN:HA	1:F:246:ARG:NE	2.29	0.48
1:F:712:LYS:O	1:F:716:VAL:HG23	2.14	0.48
1:F:978:GLN:H	1:F:978:GLN:CD	2.17	0.48
1:F:1052:SER:OG	1:F:1054:VAL:O	2.31	0.48
1:F:1445:ARG:HB3	1:F:1510:LEU:HD11	1.95	0.48
1:F:1504:ASP:HB3	1:F:1507:CYS:HB2	1.95	0.48
1:F:1736:PHE:HA	1:F:1739:TYR:CD2	2.48	0.48
1:F:1787:ARG:HB3	1:F:1830:HIS:CE1	2.49	0.48
1:F:2230:VAL:HA	1:F:2233:HIS:HB3	1.96	0.48
1:F:2317:ALA:O	1:F:2366:LYS:NZ	2.47	0.48
1:F:3232:ARG:HA	1:F:3235:LYS:HD3	1.94	0.48
1:F:3525:TYR:OH	1:F:3712:LEU:N	2.47	0.48
1:F:3924:HIS:CD2	1:F:3926:ASN:H	2.32	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3958:LEU:HB2	1:F:4115:ASN:HD22	1.79	0.48
2:L:94:TYR:CE2	2:L:96:PHE:HB3	2.49	0.48
3:M:887:LYS:HD3	3:M:911:ILE:HG12	1.96	0.48
4:Q:29:ILE:HG23	4:Q:34:TYR:HA	1.95	0.48
4:R:49:VAL:HB	4:R:53:VAL:HG13	1.96	0.48
1:A:314:SER:O	1:A:317:GLU:HG2	2.14	0.48
1:A:343:GLU:OE1	1:A:344:GLN:HG3	2.14	0.48
1:A:672:ILE:N	1:A:675:ARG:HH21	2.12	0.48
1:A:990:GLN:HB3	1:A:2781:PRO:HD3	1.95	0.48
1:A:1220:LEU:HA	1:A:1224:PHE:HD2	1.79	0.48
1:A:1418:HIS:O	1:A:1422:LYS:HG2	2.13	0.48
1:A:1597:LEU:HD22	1:A:1648:LEU:HD22	1.96	0.48
1:A:2133:LEU:O	1:A:2170:GLN:NE2	2.47	0.48
1:A:2232:ARG:O	1:A:2236:GLU:HG2	2.12	0.48
1:F:834:LEU:HD12	1:F:837:THR:HG23	1.96	0.48
1:F:962:TYR:HA	1:F:965:THR:HG22	1.95	0.48
1:F:1034:ARG:O	1:F:1038:LYS:HE3	2.13	0.48
1:F:1200:GLY:N	1:F:1202:ARG:HH12	2.12	0.48
1:F:1801:VAL:HA	1:F:1804:MET:HG3	1.95	0.48
1:F:2974:GLU:HG3	1:F:2978:LYS:HZ2	1.77	0.48
2:L:178:LYS:HG2	3:M:786:GLU:HB2	1.96	0.48
3:M:658:ILE:HG21	3:M:734:SER:HA	1.96	0.48
4:Q:1:MET:HE1	4:Q:3:GLU:H	1.79	0.48
4:Q:130:LEU:HA	4:R:42:GLN:CA	2.38	0.48
8:D:35:DT:H2'	8:D:36:DG:H8	1.79	0.48
10:I:35:DT:C4	10:I:36:DA:C6	3.02	0.48
1:A:307:GLU:O	1:A:310:LYS:HG3	2.14	0.47
1:A:406:ARG:HE	1:A:409:GLN:NE2	2.12	0.47
1:A:479:ILE:HG13	1:A:480:SER:N	2.28	0.47
1:A:664:SER:OG	1:A:725:LEU:HA	2.14	0.47
1:A:721:TYR:HD2	1:A:726:LEU:HD13	1.79	0.47
1:A:1156:GLY:O	1:A:1171:TRP:NE1	2.47	0.47
1:A:1532:LEU:HA	1:A:1556:GLY:HA3	1.96	0.47
1:A:2228:ARG:HH21	1:A:2738:LYS:NZ	2.12	0.47
1:A:2231:PHE:O	1:A:2235:LEU:HG	2.14	0.47
1:A:2279:ILE:O	1:A:2282:ALA:HB3	2.14	0.47
1:A:3236:PHE:HD2	1:A:3269:ARG:HH22	1.62	0.47
1:A:3447:VAL:HG11	1:A:3471:ILE:HG21	1.95	0.47
1:F:200:PHE:HB3	1:F:224:LEU:HD21	1.96	0.47
1:F:273:ARG:O	1:F:277:LEU:N	2.41	0.47
1:F:938:VAL:HA	1:F:941:MET:HG3	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2417:SER:OG	1:F:2418:LYS:NZ	2.46	0.47
1:F:2427:ARG:HG2	1:F:2432:GLN:HE22	1.78	0.47
1:F:3103:ILE:HD13	1:F:3138:ILE:HD11	1.96	0.47
1:F:3390:GLN:HA	1:F:3393:GLU:OE1	2.14	0.47
2:K:22:VAL:HG21	2:K:74:LEU:HB3	1.96	0.47
10:I:39:DA:N1	11:J:18:DA:C8	2.82	0.47
1:A:23:ASP:HB2	1:A:70:ARG:NE	2.29	0.47
1:A:32:HIS:O	1:A:35:ILE:HG22	2.14	0.47
1:A:741:ILE:HG22	1:A:748:TYR:CZ	2.49	0.47
1:A:1070:PRO:HG3	1:A:3715:TYR:HB2	1.96	0.47
1:A:1736:PHE:O	1:A:1740:VAL:HG13	2.14	0.47
1:A:3493:TRP:HE3	1:A:3521:ILE:HG12	1.78	0.47
1:A:3901:ARG:HH11	1:A:3971:MET:HE2	1.79	0.47
1:F:179:GLY:C	1:F:230:LEU:HD23	2.34	0.47
1:F:297:LEU:HD23	1:F:316:LEU:HA	1.96	0.47
1:F:712:LYS:NZ	1:F:743:LEU:O	2.37	0.47
1:F:1023:SER:HA	1:F:1026:ARG:HG3	1.97	0.47
1:F:1610:ASN:OD1	1:F:1611:GLN:N	2.47	0.47
1:F:1723:PRO:O	1:F:1768:ARG:NH1	2.46	0.47
1:F:2485:ARG:HH12	1:F:2530:ARG:HG2	1.78	0.47
2:N:187:LYS:HB2	2:O:187:LYS:HZ3	1.78	0.47
1:A:10:CYS:SG	1:A:11:SER:N	2.83	0.47
1:A:145:ASP:HA	1:A:147:PHE:CE2	2.49	0.47
1:A:384:MET:HA	1:A:387:GLU:HG3	1.95	0.47
1:A:682:TYR:CZ	1:A:700:LYS:HD3	2.49	0.47
1:A:1737:ASN:O	1:A:1740:VAL:HG22	2.14	0.47
1:A:2241:LEU:O	1:A:2245:TRP:HB2	2.15	0.47
1:A:2277:LEU:O	1:A:2281:MET:N	2.36	0.47
1:A:3009:LYS:HE3	1:A:3013:TYR:CE1	2.49	0.47
1:A:3557:ARG:O	1:A:3560:SER:OG	2.28	0.47
1:F:51:LEU:HD23	1:F:51:LEU:H	1.78	0.47
1:F:406:ARG:HH21	1:F:408:TYR:HB2	1.77	0.47
1:F:410:MET:O	1:F:414:LEU:HG	2.14	0.47
1:F:879:MET:HG3	1:F:881:LYS:H	1.79	0.47
1:F:1406:LEU:HD13	1:F:1415:LEU:HD21	1.94	0.47
1:F:1576:ASP:O	1:F:1580:LEU:N	2.39	0.47
1:F:2166:SER:OG	1:F:2167:PRO:HD3	2.14	0.47
1:F:3281:CYS:SG	1:F:3329:LEU:HB3	2.54	0.47
2:K:94:TYR:CE1	2:K:110:SER:HA	2.50	0.47
3:M:655:ILE:HD12	3:M:684:GLU:HB3	1.96	0.47
2:N:19:PHE:HB2	2:N:21:GLN:HE22	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:Q:25:ALA:HB2	4:Q:38:VAL:HG13	1.95	0.47
4:Q:47:GLU:HG3	4:Q:122:HIS:NE2	2.30	0.47
4:Q:57:ARG:HH12	4:Q:76:LEU:HD11	1.79	0.47
4:Q:139:LEU:HA	4:Q:142:MET:CE	2.44	0.47
4:Q:147:GLN:O	4:Q:151:ARG:HG2	2.14	0.47
1:A:1167:ASP:HA	1:A:1170:LYS:NZ	2.30	0.47
1:A:2294:ILE:HD12	1:A:2299:TYR:HD1	1.80	0.47
1:A:2402:LEU:HD11	1:A:2437:ASP:HB2	1.97	0.47
1:F:1019:ASP:OD1	1:F:1019:ASP:N	2.46	0.47
1:F:1234:GLY:HA3	1:F:1292:LYS:HZ1	1.76	0.47
1:F:1601:LEU:HD13	1:F:1651:LYS:HB3	1.96	0.47
1:F:2275:GLN:O	1:F:2279:ILE:HG12	2.14	0.47
1:F:4055:ASN:HB3	1:F:4058:VAL:HG23	1.96	0.47
2:L:55:GLU:HB3	2:L:66:TYR:CD2	2.49	0.47
2:O:54:GLN:OE1	2:O:54:GLN:N	2.44	0.47
3:P:848:HIS:CE1	3:P:899:ASP:HA	2.49	0.47
8:D:14:DA:H1'	8:D:15:DA:C2	2.50	0.47
10:I:26:DA:H1'	10:I:27:DC:C2	2.48	0.47
1:A:109:ASN:O	1:A:112:THR:OG1	2.21	0.47
1:A:323:VAL:HA	1:A:326:MET:HG2	1.95	0.47
1:A:1444:ASP:N	1:A:1444:ASP:OD1	2.46	0.47
1:A:2385:LEU:HD13	1:A:2389:PHE:HE2	1.79	0.47
1:A:3046:ARG:NH2	1:A:3181:ASP:OD1	2.47	0.47
1:A:3369:ASP:O	1:A:3373:VAL:N	2.33	0.47
1:A:3466:PRO:O	1:A:3470:GLN:HG2	2.14	0.47
1:A:3595:GLU:HB2	1:A:3606:ILE:HD11	1.96	0.47
1:A:3702:PRO:HD3	1:A:3719:ILE:HD11	1.97	0.47
1:A:3748:HIS:HB3	1:A:3750:PHE:HE1	1.79	0.47
1:F:1367:HIS:HB2	1:F:1370:ARG:NH2	2.29	0.47
1:F:1747:LEU:HD11	1:F:1781:SER:OG	2.13	0.47
1:F:3156:PRO:HA	1:F:3159:ARG:HB2	1.95	0.47
2:K:124:ARG:NH1	2:L:38:ASP:O	2.47	0.47
2:N:102:LYS:NZ	4:Q:75:HIS:HD2	2.13	0.47
4:Q:192:GLN:O	4:Q:197:LYS:HG2	2.14	0.47
4:R:1:MET:N	4:R:5:GLU:OE2	2.46	0.47
8:D:29:DG:C5	8:D:30:DT:C4	3.03	0.47
1:A:908:ASP:OD1	1:A:908:ASP:N	2.47	0.47
1:A:1101:PHE:HB3	1:A:1168:LEU:HG	1.95	0.47
1:A:1580:LEU:HG	1:A:1584:GLN:NE2	2.29	0.47
1:A:3319:ASN:CG	1:A:3321:LEU:HB2	2.35	0.47
1:A:3423:GLN:HA	1:A:3426:LYS:HE3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3493:TRP:H	1:A:3711:PRO:HG3	1.80	0.47
1:A:3601:VAL:HA	1:A:3604:LYS:HE3	1.96	0.47
1:A:3772:ASN:HD21	1:A:3788:LEU:HB2	1.79	0.47
1:F:54:GLN:HA	1:F:57:LEU:HG	1.95	0.47
1:F:168:ASP:OD2	11:J:22:DG:H5''	2.15	0.47
1:F:538:ASP:OD1	1:F:538:ASP:N	2.46	0.47
1:F:1045:THR:O	1:F:1049:GLN:HG3	2.15	0.47
1:F:1400:VAL:HG12	1:F:1404:LYS:HE2	1.97	0.47
1:F:1685:ASP:OD1	1:F:1686:LEU:N	2.48	0.47
1:F:1727:ARG:CZ	1:F:1772:HIS:HA	2.44	0.47
1:F:1871:MET:CE	1:F:1871:MET:HA	2.44	0.47
1:F:2231:PHE:CZ	1:F:2272:VAL:HG12	2.50	0.47
1:F:2461:PHE:HB2	1:F:2473:MET:SD	2.55	0.47
1:F:2930:TYR:O	1:F:2935:GLU:N	2.44	0.47
1:F:3979:LEU:O	1:F:3983:ILE:HG12	2.14	0.47
2:L:28:LEU:HD21	2:L:70:LEU:HB3	1.97	0.47
2:O:107:ARG:HH21	2:O:110:SER:HA	1.79	0.47
2:O:166:VAL:HG13	3:P:847:PHE:HD1	1.80	0.47
3:P:856:LEU:HD11	3:P:878:PHE:CD1	2.50	0.47
4:R:174:LEU:HD22	4:R:180:LYS:HG3	1.96	0.47
11:J:26:DT:H1'	11:J:27:DT:H3	1.79	0.47
1:A:493:LYS:O	1:A:625:ASN:ND2	2.48	0.47
1:A:710:PHE:HA	1:A:713:GLU:OE1	2.14	0.47
1:A:783:HIS:HA	1:A:786:GLN:HG2	1.96	0.47
1:A:828:LYS:HB2	1:A:830:VAL:HG22	1.96	0.47
1:A:859:LEU:O	1:A:867:ASN:ND2	2.45	0.47
1:A:1072:ALA:CA	1:A:1075:ARG:HH21	2.27	0.47
1:A:3113:ASN:O	1:A:3117:ILE:HG12	2.15	0.47
1:A:3505:LEU:HG	1:A:3515:GLN:NE2	2.29	0.47
1:A:3689:ASP:OD1	1:A:3690:PHE:N	2.48	0.47
1:A:3771:MET:O	1:A:3775:LEU:HG	2.15	0.47
1:A:3859:TYR:HB2	1:A:4077:TYR:HE1	1.78	0.47
1:A:4055:ASN:O	1:A:4059:ILE:HG12	2.14	0.47
1:F:61:ARG:HD3	1:F:62:ASP:N	2.30	0.47
1:F:529:ASP:N	1:F:529:ASP:OD1	2.47	0.47
1:F:585:ILE:HG13	1:F:611:ASN:H	1.79	0.47
1:F:703:CYS:HB3	1:F:707:PHE:CE2	2.50	0.47
1:F:723:ASP:C	1:F:725:LEU:H	2.18	0.47
1:F:1184:ARG:HH21	1:F:1262:ALA:HA	1.80	0.47
1:F:1871:MET:HE2	1:F:1874:TYR:HD2	1.80	0.47
1:F:1877:LEU:HA	1:F:1880:MET:HG2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2228:ARG:HD3	10:I:44:DG:P	2.54	0.47
1:F:3278:GLN:HB3	1:F:3282:ARG:NH1	2.27	0.47
1:F:3314:SER:OG	1:F:3317:SER:HB2	2.15	0.47
1:F:3387:GLU:HA	1:F:3390:GLN:HE21	1.78	0.47
1:F:3530:VAL:HG23	1:F:3531:TYR:N	2.30	0.47
2:L:162:PHE:CD2	3:M:843:LEU:HD13	2.50	0.47
2:L:182:LEU:HD12	3:M:781:ILE:HG23	1.96	0.47
2:N:45:GLY:CA	2:N:113:LEU:HA	2.45	0.47
2:N:88:PHE:CE1	2:N:93:CYS:HA	2.50	0.47
2:N:188:LYS:HE3	3:P:769:THR:HG23	1.97	0.47
4:Q:106:LEU:HD22	4:Q:121:PHE:H	1.79	0.47
4:Q:135:LEU:HB2	4:R:41:LEU:CD1	2.45	0.47
4:Q:161:ASP:HB2	4:Q:184:PHE:HB3	1.96	0.47
4:Q:165:GLN:HA	4:Q:168:GLN:HG2	1.95	0.47
4:R:109:ARG:NH1	4:R:119:TRP:H	2.13	0.47
4:R:137:ARG:HA	4:R:140:MET:SD	2.54	0.47
4:R:195:ILE:HG13	4:R:196:GLU:HG3	1.96	0.47
8:D:15:DA:N7	8:D:16:DA:N6	2.62	0.47
10:I:41:DT:H2'	10:I:43:DT:N3	2.30	0.47
1:A:250:ASN:O	1:A:253:LEU:HB3	2.15	0.47
1:A:323:VAL:O	1:A:327:VAL:HG12	2.15	0.47
1:A:1168:LEU:HA	1:A:1171:TRP:HB3	1.96	0.47
1:A:2540:LEU:HD11	1:A:2835:LYS:HD2	1.97	0.47
1:A:2978:LYS:O	1:A:2981:TRP:NE1	2.47	0.47
1:A:3494:GLN:HG2	1:A:3709:GLY:HA2	1.96	0.47
1:A:3513:ALA:HA	1:A:3516:HIS:ND1	2.30	0.47
1:A:3971:MET:SD	1:A:3974:MET:HB2	2.55	0.47
1:F:530:LEU:O	1:F:533:HIS:HB3	2.14	0.47
1:F:1185:HIS:HA	1:F:1188:ILE:HG12	1.97	0.47
1:F:1292:LYS:HD3	1:F:1296:PHE:CZ	2.48	0.47
1:F:1335:CYS:HB3	1:F:1382:ILE:HD12	1.96	0.47
1:F:1452:VAL:O	1:F:1456:LYS:HG2	2.14	0.47
1:F:1685:ASP:O	1:F:1689:LYS:N	2.39	0.47
1:F:1750:LEU:HA	1:F:1758:LEU:HD23	1.97	0.47
1:F:2188:GLU:O	1:F:2192:THR:HG23	2.15	0.47
1:F:3155:VAL:N	1:F:3159:ARG:HH22	2.13	0.47
1:F:3772:ASN:OD1	1:F:3788:LEU:HB3	2.15	0.47
3:M:785:ASN:ND2	3:M:787:GLN:O	2.47	0.47
1:A:675:ARG:O	1:A:679:LYS:HG3	2.15	0.47
1:A:934:LEU:HA	1:A:937:MET:HG2	1.96	0.47
1:A:1174:ALA:HA	1:A:1222:ASN:HD21	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1184:ARG:NH2	1:A:1262:ALA:HA	2.30	0.47
1:A:2310:VAL:HG22	1:A:2316:TYR:CD2	2.49	0.47
1:A:2761:LEU:HA	1:A:2764:LYS:HD2	1.97	0.47
1:A:3363:SER:HA	1:A:3380:ARG:HH11	1.79	0.47
1:A:3778:ASP:O	1:A:3782:SER:OG	2.20	0.47
1:A:4065:LEU:HA	1:A:4069:GLU:HB3	1.97	0.47
1:F:1368:LEU:HA	1:F:1371:VAL:HG22	1.96	0.47
1:F:1776:GLU:HG3	1:F:1777:LEU:HD12	1.97	0.47
1:F:2383:PHE:HZ	1:F:2411:LEU:HD22	1.79	0.47
1:F:2396:LEU:O	1:F:2400:VAL:HG23	2.15	0.47
1:F:2418:LYS:HD3	1:F:2418:LYS:HA	1.72	0.47
1:F:2940:ARG:O	1:F:2944:THR:HG23	2.13	0.47
1:F:3314:SER:HG	1:F:3318:LYS:H	1.63	0.47
2:K:3:ARG:NH2	2:K:21:GLN:OE1	2.47	0.47
2:L:20:LEU:HG	2:L:86:PHE:HE2	1.80	0.47
4:Q:197:LYS:HD2	4:R:152:GLU:HB3	1.97	0.47
10:I:24:DA:H4'	10:I:26:DA:N1	2.29	0.47
1:A:1620:THR:O	1:A:1624:GLN:HG2	2.15	0.47
1:A:1626:TRP:CD1	1:A:1670:GLU:HG3	2.49	0.47
1:A:2404:ARG:HA	1:A:2404:ARG:HD2	1.70	0.47
1:A:2826:LEU:HA	1:A:2829:LYS:HD2	1.95	0.47
1:A:3314:SER:O	1:A:3317:SER:OG	2.20	0.47
1:F:414:LEU:HA	1:F:417:VAL:HG12	1.96	0.47
1:F:1453:SER:O	1:F:1457:GLN:HG3	2.15	0.47
1:F:2304:VAL:O	1:F:2348:GLN:NE2	2.48	0.47
1:F:3121:LEU:O	1:F:3124:SER:OG	2.27	0.47
1:F:3992:ARG:HE	1:F:4100:GLU:HG3	1.80	0.47
4:Q:34:TYR:CD1	4:Q:54:VAL:HG22	2.48	0.47
1:A:417:VAL:HA	1:A:420:VAL:HG12	1.96	0.46
1:A:709:LYS:HG2	1:A:713:GLU:OE2	2.15	0.46
1:A:913:ARG:HE	1:A:917:LEU:HD11	1.79	0.46
1:A:1442:GLN:OE1	1:A:1445:ARG:NH2	2.27	0.46
1:A:3009:LYS:HA	1:A:3009:LYS:HD2	1.74	0.46
1:A:3165:THR:O	1:A:3169:PRO:HD3	2.16	0.46
1:A:3235:LYS:HB3	1:A:3239:LYS:HE2	1.96	0.46
1:A:3266:SER:HA	1:A:3272:TRP:NE1	2.30	0.46
1:F:2193:ILE:HA	1:F:2196:TRP:CH2	2.50	0.46
1:F:2288:TYR:CE2	1:F:2296:SER:HA	2.50	0.46
1:F:3658:ASP:OD1	1:F:3658:ASP:N	2.48	0.46
1:F:3690:PHE:HZ	1:F:3695:LEU:HB2	1.80	0.46
2:K:98:GLU:HA	2:K:109:GLY:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:P:665:CYS:HB3	3:P:700:VAL:HG22	1.95	0.46
4:Q:163:GLU:HG3	4:R:179:LEU:HB2	1.97	0.46
4:R:193:PHE:O	4:R:198:LEU:N	2.48	0.46
11:J:17:DT:H2"	11:J:18:DA:N9	2.29	0.46
1:A:410:MET:O	1:A:414:LEU:HG	2.15	0.46
1:A:650:SER:HB3	1:A:673:THR:HG21	1.97	0.46
1:A:715:ALA:O	1:A:718:MET:HG3	2.16	0.46
1:A:762:TYR:HD2	1:A:765:LEU:HD23	1.81	0.46
1:A:1558:TYR:O	1:A:1562:LEU:HG	2.15	0.46
1:A:2349:LEU:HB3	1:A:2360:PHE:CE2	2.50	0.46
1:A:2746:LYS:O	1:A:2750:GLU:OE1	2.33	0.46
1:A:3266:SER:HA	1:A:3272:TRP:CD1	2.49	0.46
1:A:3420:CYS:O	1:A:3424:LEU:HG	2.16	0.46
1:A:4087:HIS:HA	1:A:4090:ARG:HD2	1.97	0.46
1:F:457:CYS:O	1:F:461:ILE:HG12	2.15	0.46
1:F:472:GLY:O	1:F:475:LEU:HB3	2.15	0.46
1:F:2307:MET:HE1	1:F:2320:ALA:HB2	1.97	0.46
1:F:3049:LEU:O	1:F:3053:LEU:HG	2.16	0.46
1:F:3546:SER:O	1:F:3549:HIS:NE2	2.48	0.46
1:F:4040:PRO:HA	1:F:4043:LYS:HG2	1.97	0.46
2:K:120:ALA:HA	2:L:40:HIS:CE1	2.50	0.46
2:K:164:LYS:HZ3	3:M:898:ILE:HA	1.80	0.46
3:M:865:ILE:HG21	3:M:869:HIS:HA	1.97	0.46
2:O:67:VAL:HG23	2:O:71:ARG:HH22	1.80	0.46
4:R:151:ARG:O	4:R:155:THR:HG23	2.14	0.46
1:A:76:ILE:HA	1:A:79:ARG:HB2	1.97	0.46
1:A:639:ALA:O	1:A:643:GLU:N	2.48	0.46
1:A:721:TYR:HB2	1:A:726:LEU:HD13	1.98	0.46
1:A:933:LEU:HD12	1:A:2793:PRO:HB2	1.97	0.46
1:A:975:ASP:O	1:A:981:ARG:NH2	2.48	0.46
1:A:1300:SER:CA	1:A:1304:HIS:HB2	2.40	0.46
1:A:1418:HIS:O	1:A:1421:GLU:HG2	2.14	0.46
1:A:1576:ASP:OD1	1:A:1576:ASP:N	2.47	0.46
1:A:1820:VAL:HA	1:A:1824:LEU:HD12	1.98	0.46
1:A:2246:LYS:HA	1:A:2249:LEU:HB2	1.97	0.46
1:A:2485:ARG:HH22	1:A:2530:ARG:HA	1.80	0.46
1:A:3172:LYS:HD3	1:A:3248:LYS:HB3	1.97	0.46
1:A:3324:ARG:HB3	1:A:3391:ALA:HB3	1.98	0.46
1:A:3956:PRO:HD2	1:A:4121:TRP:HB2	1.98	0.46
1:F:242:PRO:C	1:F:246:ARG:HH21	2.18	0.46
1:F:933:LEU:HD13	1:F:2793:PRO:HG2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1169:VAL:HG21	1:F:1198:LEU:HD21	1.96	0.46
1:F:1195:VAL:HA	1:F:1198:LEU:HG	1.97	0.46
1:F:1347:THR:O	1:F:1351:THR:OG1	2.22	0.46
1:F:1952:ILE:HG23	1:F:1956:PHE:HB2	1.96	0.46
1:F:3965:ARG:HA	1:F:3968:ILE:HG12	1.98	0.46
2:K:30:SER:HA	2:K:49:GLU:HB2	1.96	0.46
2:K:140:LYS:HE3	2:L:141:ASN:ND2	2.31	0.46
2:L:52:ILE:HA	2:L:55:GLU:HG3	1.97	0.46
3:M:863:VAL:HB	3:M:886:PHE:CE2	2.50	0.46
3:P:882:PHE:HB3	3:P:884:ARG:HD3	1.97	0.46
4:Q:219:MET:HA	4:Q:222:THR:HG22	1.97	0.46
4:R:218:TYR:O	4:R:222:THR:HG23	2.16	0.46
1:A:342:MET:HE2	1:A:345:PHE:CD2	2.51	0.46
1:A:2738:LYS:NZ	9:E:43:DT:H3'	2.30	0.46
1:A:3260:LYS:O	1:A:3263:HIS:HB3	2.15	0.46
1:A:3349:ALA:HA	1:A:3352:GLU:HB3	1.97	0.46
1:A:4079:ALA:O	1:A:4083:GLY:N	2.47	0.46
1:F:1045:THR:HG22	1:F:1047:GLN:H	1.80	0.46
1:F:1505:LEU:HD12	1:F:1506:SER:N	2.31	0.46
1:F:2164:TRP:C	1:F:2167:PRO:HD2	2.36	0.46
1:F:3759:ARG:O	1:F:3763:ARG:HG2	2.16	0.46
1:F:4107:LEU:HD12	1:F:4111:ALA:HB3	1.97	0.46
3:M:666:VAL:HG12	3:M:675:LYS:HG3	1.97	0.46
3:M:826:ILE:HD12	3:M:878:PHE:HZ	1.81	0.46
4:Q:38:VAL:HB	4:Q:45:TRP:HB2	1.97	0.46
4:Q:295:ARG:HE	4:Q:295:ARG:HB2	1.56	0.46
4:R:217:LEU:O	4:R:221:VAL:HG23	2.15	0.46
1:A:337:LYS:HB2	1:A:369:PHE:CE1	2.49	0.46
1:A:732:PHE:CD2	1:A:733:LEU:HD22	2.50	0.46
1:A:980:THR:HA	1:A:983:LEU:HG	1.98	0.46
1:A:1028:PHE:HA	1:A:1031:ARG:NE	2.28	0.46
1:A:2356:MET:HE1	1:A:2359:LYS:HD3	1.96	0.46
1:A:2834:GLN:HG3	1:A:2838:GLN:NE2	2.31	0.46
1:A:3227:ILE:O	1:A:3231:ILE:HG23	2.16	0.46
1:A:3930:VAL:HA	1:A:3937:VAL:HA	1.96	0.46
1:A:3992:ARG:HE	1:A:4100:GLU:HG3	1.80	0.46
1:A:4111:ALA:O	1:A:4115:ASN:ND2	2.48	0.46
1:F:208:MET:HE1	1:F:252:VAL:HG11	1.96	0.46
1:F:801:LYS:HD3	1:F:801:LYS:HA	1.70	0.46
1:F:1190:LEU:O	1:F:1193:LYS:HG2	2.16	0.46
1:F:1294:VAL:HA	1:F:1297:PHE:CD2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2427:ARG:HG2	1:F:2432:GLN:NE2	2.30	0.46
1:F:2817:LEU:HD22	1:F:2865:HIS:CD2	2.50	0.46
1:F:3236:PHE:HD2	1:F:3269:ARG:HH22	1.61	0.46
1:F:3550:LYS:HA	1:F:3553:GLU:CD	2.36	0.46
3:M:848:HIS:NE2	3:M:897:SER:HB3	2.31	0.46
2:O:159:GLN:O	2:O:163:GLU:HG3	2.16	0.46
4:Q:211:VAL:O	4:Q:215:GLN:HG2	2.14	0.46
8:D:19:DA:H2	9:E:39:DA:H2	1.62	0.46
1:A:200:PHE:HB2	1:A:246:ARG:HH12	1.81	0.46
1:A:275:PHE:CZ	1:A:319:PHE:HB2	2.51	0.46
1:A:934:LEU:O	1:A:937:MET:HG2	2.15	0.46
1:A:943:GLY:HA3	1:A:2783:ILE:HG21	1.97	0.46
1:A:1214:GLU:OE1	1:A:1214:GLU:N	2.46	0.46
1:A:1642:LYS:O	1:A:1646:LEU:HG	2.15	0.46
1:A:1671:VAL:HA	1:A:1674:THR:HB	1.97	0.46
1:A:2225:HIS:CG	1:A:2230:VAL:HG23	2.50	0.46
1:A:2310:VAL:HG11	1:A:2359:LYS:HE2	1.97	0.46
1:A:3243:ILE:HD11	1:A:3258:LEU:HD23	1.97	0.46
1:A:3301:LEU:HB2	1:A:3333:THR:HG21	1.98	0.46
1:A:3455:LYS:HA	1:A:3490:VAL:HG23	1.97	0.46
1:A:3593:ARG:HH12	1:A:3661:ASP:CG	2.18	0.46
1:F:88:PHE:HD2	1:F:89:LEU:HD22	1.81	0.46
1:F:174:VAL:O	1:F:177:LEU:HB2	2.16	0.46
1:F:709:LYS:HG2	1:F:1389:VAL:HG11	1.97	0.46
1:F:1740:VAL:HA	1:F:1743:MET:HG2	1.97	0.46
1:F:2102:LYS:HE2	1:F:2102:LYS:HB3	1.78	0.46
1:F:2135:ASN:OD1	1:F:2135:ASN:N	2.49	0.46
1:F:2455:LEU:HD12	1:F:2458:VAL:HB	1.97	0.46
1:F:3029:LYS:N	1:F:3067:LYS:HZ1	2.14	0.46
1:F:3327:ASN:HB2	1:F:3388:ALA:HB2	1.98	0.46
1:F:3494:GLN:HB3	1:F:3709:GLY:N	2.30	0.46
3:M:793:ALA:O	3:M:814:ARG:HG3	2.16	0.46
3:M:803:TYR:HB2	3:M:805:TRP:CE2	2.51	0.46
3:P:668:SER:HG	3:P:704:SER:H	1.62	0.46
1:A:759:GLY:CA	1:A:766:ALA:HB2	2.46	0.46
1:A:1048:GLN:O	1:A:1052:SER:N	2.41	0.46
1:A:1369:MET:HA	1:A:1372:LEU:HB3	1.98	0.46
1:A:1437:TYR:HB2	1:A:1486:LEU:HD22	1.98	0.46
1:A:1558:TYR:O	1:A:1561:SER:OG	2.26	0.46
1:A:2817:LEU:O	1:A:2820:MET:HG3	2.15	0.46
1:A:2898:LEU:HD13	1:A:3972:LEU:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3583:LEU:HA	1:A:3586:LYS:HE2	1.97	0.46
1:A:3881:ASP:N	1:A:3966:GLN:OE1	2.49	0.46
1:A:4038:TRP:HE3	1:A:4043:LYS:HZ3	1.63	0.46
1:F:997:ASN:HA	1:F:1043:GLN:HE21	1.80	0.46
1:F:1048:GLN:CD	1:F:1051:LYS:HZ3	2.19	0.46
1:F:2328:ARG:HA	1:F:2333:ARG:HH21	1.81	0.46
1:F:3586:LYS:HD3	1:F:3664:ASN:HD21	1.81	0.46
2:K:23:SER:N	2:K:33:VAL:O	2.49	0.46
2:K:157:ASP:OD2	3:M:837:ARG:NE	2.49	0.46
4:R:48:GLN:HB3	4:R:126:ALA:HB1	1.96	0.46
1:A:1130:ALA:O	1:A:1134:LEU:HG	2.16	0.46
1:A:2123:PRO:HA	1:A:2127:LYS:HG2	1.97	0.46
1:A:2227:LYS:O	1:A:2229:ALA:N	2.48	0.46
1:A:2266:ASN:O	1:A:2311:ARG:HB2	2.16	0.46
1:A:2421:VAL:O	1:A:2425:ARG:HG3	2.16	0.46
1:A:3793:VAL:HG12	1:A:3803:ILE:HB	1.97	0.46
1:F:453:MET:HA	1:F:456:VAL:HB	1.97	0.46
1:F:520:LYS:HA	1:F:520:LYS:HD3	1.72	0.46
1:F:670:LEU:HB3	1:F:732:PHE:CD1	2.51	0.46
1:F:965:THR:O	1:F:969:LEU:HG	2.16	0.46
1:F:1176:CYS:SG	1:F:1188:ILE:HG22	2.56	0.46
1:F:2522:ARG:HG3	1:F:2561:PHE:CE1	2.51	0.46
1:F:2928:LYS:HZ3	1:F:2993:PHE:HB2	1.81	0.46
1:F:3557:ARG:HG3	1:F:3561:LYS:HZ1	1.80	0.46
1:F:3582:GLU:O	1:F:3586:LYS:NZ	2.26	0.46
1:F:3772:ASN:ND2	1:F:3787:GLN:HE22	2.13	0.46
1:F:3924:HIS:H	1:F:3927:ASN:HD21	1.64	0.46
3:P:816:HIS:O	3:P:850:ALA:HA	2.16	0.46
8:D:14:DA:H2''	8:D:15:DA:C6	2.50	0.46
9:E:41:DT:H2''	9:E:42:DA:H2'	1.97	0.46
1:A:201:LEU:HB2	1:A:246:ARG:NH2	2.31	0.46
1:A:207:GLN:HE22	1:A:216:LYS:C	2.19	0.46
1:A:364:ARG:HA	1:A:364:ARG:HE	1.81	0.46
1:A:529:ASP:O	1:A:533:HIS:N	2.29	0.46
1:A:654:ILE:HD12	1:A:706:LEU:HD21	1.97	0.46
1:A:832:LYS:C	1:A:834:LEU:H	2.19	0.46
1:A:1182:GLU:HG3	1:A:1186:LYS:NZ	2.31	0.46
1:A:1756:PRO:HG3	1:A:1797:LEU:HD12	1.98	0.46
1:A:1797:LEU:O	1:A:1801:VAL:HG22	2.16	0.46
1:A:2330:VAL:O	1:A:2333:ARG:N	2.49	0.46
1:A:3666:LEU:HA	1:A:3669:LYS:NZ	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:54:GLN:HB3	1:F:3097:ASP:HB2	1.98	0.46
1:F:139:ARG:HA	1:F:142:ARG:NH2	2.18	0.46
1:F:528:VAL:O	1:F:532:ARG:HG2	2.16	0.46
1:F:1167:ASP:O	1:F:1170:LYS:HG3	2.16	0.46
1:F:2182:ILE:O	1:F:2186:VAL:HG23	2.16	0.46
1:F:2189:ILE:O	1:F:2192:THR:OG1	2.27	0.46
1:F:2511:ILE:HG13	1:F:2550:ILE:HG23	1.98	0.46
1:F:2939:LEU:HD13	1:F:2957:LEU:HD22	1.98	0.46
1:F:3090:TYR:O	1:F:3094:ASP:N	2.49	0.46
1:F:3179:TRP:HE3	1:F:3242:MET:SD	2.38	0.46
2:K:188:LYS:NZ	3:M:767:ILE:O	2.44	0.46
2:N:60:ALA:HB1	4:Q:93:ALA:HB2	1.98	0.46
2:O:59:MET:SD	2:O:61:MET:HB3	2.56	0.46
4:Q:150:VAL:HA	4:Q:153:LEU:HD12	1.97	0.46
1:A:242:PRO:O	1:A:246:ARG:HG2	2.15	0.46
1:A:1121:LEU:O	1:A:1124:ILE:HG12	2.16	0.46
1:A:1565:GLU:OE1	1:A:1606:ARG:NH1	2.46	0.46
1:A:1958:GLU:H	1:A:1958:GLU:CD	2.19	0.46
1:A:2724:ASP:N	1:A:2724:ASP:OD1	2.48	0.46
1:A:2726:LEU:HB3	1:A:2727:ARG:HH21	1.80	0.46
1:A:2871:LEU:HD11	1:A:2892:LEU:HD21	1.98	0.46
1:F:241:ASP:O	1:F:244:THR:HG22	2.16	0.46
1:F:966:PHE:HA	1:F:969:LEU:HD12	1.97	0.46
1:F:2310:VAL:HG13	1:F:2316:TYR:CE2	2.50	0.46
1:F:3138:ILE:HG22	1:F:3189:PHE:HZ	1.80	0.46
1:F:3163:THR:O	1:F:3167:ARG:NH1	2.49	0.46
1:F:3171:ALA:N	1:F:3179:TRP:HZ2	2.14	0.46
1:F:3625:LEU:N	1:F:3683:CYS:HA	2.31	0.46
1:F:3901:ARG:HD2	1:F:3902:SER:N	2.31	0.46
1:F:4115:ASN:O	1:F:4119:ARG:N	2.42	0.46
2:L:71:ARG:NH1	2:L:74:LEU:HD12	2.31	0.46
3:M:665:CYS:SG	3:M:690:VAL:HG13	2.55	0.46
2:N:34:ILE:HD12	2:N:74:LEU:CD2	2.45	0.46
4:Q:137:ARG:HB2	4:Q:138:PRO:HD3	1.98	0.46
1:A:139:ARG:NH2	1:A:179:GLY:O	2.49	0.45
1:A:848:LEU:O	1:A:852:ARG:HG3	2.15	0.45
1:A:860:GLY:HA3	1:A:3136:THR:CB	2.46	0.45
1:A:1264:LEU:HD11	1:A:1344:PHE:HB2	1.98	0.45
1:A:1420:ARG:HH12	1:A:1469:PRO:HD3	1.81	0.45
1:A:1577:LEU:H	1:A:1577:LEU:HD12	1.80	0.45
1:A:2972:TYR:CZ	1:A:2997:ALA:HB1	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3081:HIS:HB2	1:A:3082:TYR:CE2	2.51	0.45
1:A:3158:LYS:HZ3	1:A:3162:ASN:HB3	1.81	0.45
1:A:3229:SER:N	1:A:3232:ARG:HH21	2.14	0.45
1:A:3387:GLU:O	1:A:3390:GLN:HG2	2.16	0.45
1:A:4113:ASP:O	1:A:4117:LEU:HG	2.16	0.45
1:F:802:THR:OG1	1:F:803:SER:N	2.48	0.45
1:F:934:LEU:HA	1:F:937:MET:HG2	1.98	0.45
1:F:1250:LEU:HD12	1:F:1251:GLN:N	2.31	0.45
1:F:1611:GLN:NE2	1:F:1614:GLN:HG3	2.30	0.45
1:F:1824:LEU:O	1:F:1828:LEU:HG	2.16	0.45
1:F:2228:ARG:HD3	10:I:44:DG:OP2	2.16	0.45
1:F:3300:VAL:HG13	1:F:3300:VAL:O	2.16	0.45
1:F:4127:TRP:CD1	1:F:4128:MET:N	2.85	0.45
2:O:163:GLU:HG2	3:P:843:LEU:HD22	1.97	0.45
3:P:864:ILE:HD11	3:P:906:GLU:HG2	1.98	0.45
4:R:166:ASP:O	4:R:170:SER:HB3	2.16	0.45
1:A:296:VAL:HG13	1:A:297:LEU:HD12	1.98	0.45
1:A:432:THR:O	1:A:435:LEU:HG	2.16	0.45
1:A:565:TYR:OH	1:A:642:PHE:HB2	2.15	0.45
1:A:898:PHE:HB2	1:A:901:MET:O	2.17	0.45
1:A:1611:GLN:NE2	1:A:1613:HIS:HB2	2.31	0.45
1:A:1667:SER:O	1:A:1670:GLU:HG2	2.16	0.45
1:A:1671:VAL:O	1:A:1675:TYR:N	2.39	0.45
1:A:2349:LEU:O	1:A:2353:GLN:HB2	2.16	0.45
1:A:2376:ASP:OD1	1:A:2377:ARG:N	2.48	0.45
1:A:3516:HIS:CE1	1:A:3554:PHE:HZ	2.34	0.45
1:A:3758:LEU:O	1:A:3762:GLN:N	2.42	0.45
1:F:30:ALA:O	1:F:33:GLN:HG2	2.16	0.45
1:F:1307:ILE:HG13	1:F:1308:ALA:H	1.81	0.45
1:F:1342:MET:HB2	1:F:1402:LEU:HD22	1.97	0.45
1:F:1465:HIS:HA	1:F:1468:LEU:HB3	1.98	0.45
1:F:1504:ASP:OD2	1:F:1506:SER:OG	2.34	0.45
1:F:1591:LYS:O	1:F:1594:SER:OG	2.28	0.45
1:F:2474:TYR:O	1:F:2478:MET:HG3	2.15	0.45
1:F:2791:ILE:O	1:F:2794:LEU:HB2	2.16	0.45
1:F:3008:TRP:H	1:F:3008:TRP:HE3	1.61	0.45
1:F:3490:VAL:HG13	1:F:3490:VAL:O	2.16	0.45
1:F:3495:PHE:HA	1:F:3498:TRP:HB2	1.99	0.45
1:F:3582:GLU:H	1:F:3582:GLU:CD	2.18	0.45
1:F:3736:LYS:HE2	1:F:3752:VAL:HB	1.98	0.45
1:F:4125:GLU:HG2	1:F:4127:TRP:CZ2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:M:813:PHE:HB3	3:M:816:HIS:HB2	1.98	0.45
3:M:879:ARG:NH1	3:M:888:ILE:HD11	2.31	0.45
2:O:29:GLU:OE1	2:O:71:ARG:HD3	2.16	0.45
4:Q:17:GLN:O	4:Q:94:THR:OG1	2.34	0.45
9:E:32:DA:H2'	9:E:33:DA:H3'	1.98	0.45
10:I:27:DC:H2'	11:J:30:DT:C2	2.51	0.45
1:A:78:PHE:HB2	1:A:79:ARG:HH12	1.81	0.45
1:A:234:PHE:HD1	1:A:235:THR:HG23	1.82	0.45
1:A:1418:HIS:HA	1:A:1421:GLU:CD	2.37	0.45
1:A:1428:ILE:H	1:A:1428:ILE:HD12	1.80	0.45
1:A:1646:LEU:HD23	1:A:1678:LEU:HD13	1.99	0.45
1:A:2130:HIS:HA	1:A:2164:TRP:CH2	2.51	0.45
1:A:2584:CYS:SG	1:A:2779:ASP:N	2.90	0.45
1:A:2955:SER:O	1:A:2958:LEU:HG	2.17	0.45
1:A:3072:GLU:OE1	1:A:3072:GLU:N	2.43	0.45
1:A:3078:LEU:HA	1:A:3082:TYR:HD2	1.81	0.45
1:A:3192:LYS:HB3	1:A:3196:LYS:NZ	2.31	0.45
1:A:3760:GLN:O	1:A:3764:VAL:HG23	2.17	0.45
1:F:30:ALA:O	1:F:34:LEU:HG	2.17	0.45
1:F:320:LEU:HA	1:F:323:VAL:HG22	1.98	0.45
1:F:394:GLN:CD	1:F:1737:ASN:HB3	2.36	0.45
1:F:1115:HIS:HB2	1:F:1180:GLN:HG3	1.97	0.45
1:F:1662:ASN:OD1	1:F:1663:THR:N	2.49	0.45
3:M:663:GLU:HA	3:M:688:TYR:HB2	1.97	0.45
2:O:147:GLU:O	2:O:150:ARG:HG3	2.16	0.45
4:Q:150:VAL:HG13	4:R:153:LEU:HD13	1.97	0.45
10:I:33:DA:H2''	10:I:34:DC:C6	2.51	0.45
1:A:79:ARG:HG2	1:A:79:ARG:HH11	1.82	0.45
1:A:676:ASN:O	1:A:679:LYS:HB2	2.16	0.45
1:A:984:TYR:HD1	1:A:987:LEU:HD23	1.82	0.45
1:A:1111:LEU:HD22	1:A:1183:CYS:HB2	1.99	0.45
1:A:1217:VAL:HA	1:A:1285:GLU:OE1	2.17	0.45
1:A:1253:THR:O	1:A:1257:LEU:HG	2.17	0.45
1:A:1731:PRO:HA	1:A:1736:PHE:CD2	2.51	0.45
1:A:2269:ASP:N	1:A:2269:ASP:OD1	2.48	0.45
1:A:2271:SER:HA	1:A:2274:ILE:HD12	1.99	0.45
1:A:2312:TYR:HE2	8:D:17:DT:P	2.40	0.45
1:A:2348:GLN:HG2	1:A:2352:HIS:HE1	1.82	0.45
1:A:2556:SER:O	1:A:2559:THR:OG1	2.30	0.45
1:A:3457:ASN:N	1:A:3457:ASN:OD1	2.49	0.45
1:F:296:VAL:HG22	1:F:300:TRP:CD1	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:908:ASP:O	1:F:911:LEU:HB2	2.17	0.45
1:F:1131:ILE:HD11	1:F:1186:LYS:HG2	1.99	0.45
1:F:1149:LYS:H	1:F:1151:ARG:HH12	1.64	0.45
1:F:1156:GLY:O	1:F:1158:PRO:HD3	2.17	0.45
1:F:1251:GLN:N	1:F:1251:GLN:OE1	2.34	0.45
1:F:2233:HIS:CE1	1:F:2728:LEU:HA	2.51	0.45
1:F:2241:LEU:HA	1:F:2244:CYS:SG	2.56	0.45
1:F:2923:TRP:HE3	1:F:2942:ILE:HG23	1.82	0.45
1:F:3882:LEU:HD23	1:F:3885:ARG:NH1	2.32	0.45
1:F:3999:THR:HA	1:F:4002:MET:HE1	1.98	0.45
2:L:8:ILE:HD11	2:L:18:HIS:HB2	1.98	0.45
3:M:753:HIS:CE1	3:M:758:TYR:HE2	2.34	0.45
3:M:879:ARG:HB2	3:M:880:ARG:NH1	2.31	0.45
2:N:183:VAL:O	2:N:187:LYS:HG2	2.16	0.45
2:O:25:GLU:HG2	2:O:26:LYS:N	2.30	0.45
1:A:896:VAL:N	1:A:903:PRO:O	2.47	0.45
1:A:1012:ALA:HA	1:A:1015:ASP:OD2	2.16	0.45
1:A:1513:GLY:O	1:A:1517:LEU:HG	2.17	0.45
1:A:2411:LEU:H	1:A:2411:LEU:HD23	1.80	0.45
1:A:3103:ILE:HD13	1:A:3138:ILE:HD11	1.98	0.45
1:F:394:GLN:OE1	1:F:1737:ASN:HB3	2.16	0.45
1:F:487:LEU:HA	1:F:490:ILE:HG22	1.98	0.45
1:F:1925:GLU:OE1	1:F:1941:HIS:NE2	2.49	0.45
1:F:2093:CYS:O	1:F:2096:PRO:HD2	2.16	0.45
1:F:2860:ASP:O	1:F:2864:GLN:HG2	2.17	0.45
1:F:2974:GLU:O	1:F:2978:LYS:HG3	2.17	0.45
1:F:3462:ARG:O	1:F:3465:PHE:HB3	2.16	0.45
2:N:36:LEU:HD11	2:N:88:PHE:CG	2.51	0.45
2:N:144:LEU:HD13	2:O:145:GLN:HB2	1.99	0.45
8:D:13:DC:O5'	8:D:14:DA:C5	2.69	0.45
9:E:34:DC:H5	9:E:35:DT:C2	2.35	0.45
11:J:17:DT:H2''	11:J:18:DA:C4	2.52	0.45
1:A:215:PRO:C	1:A:217:LEU:N	2.70	0.45
1:A:765:LEU:HD12	1:A:766:ALA:N	2.32	0.45
1:A:1583:MET:O	1:A:1586:SER:OG	2.34	0.45
1:A:2497:GLU:HA	1:A:2500:LYS:HE2	1.98	0.45
1:A:3002:TYR:CE2	1:A:3013:TYR:HB3	2.52	0.45
1:A:3255:ALA:O	1:A:3259:LEU:N	2.41	0.45
1:A:3583:LEU:HD13	1:A:3733:ARG:HH21	1.81	0.45
1:A:3628:PHE:HA	1:A:3631:LYS:HE3	1.99	0.45
1:A:3670:MET:HG2	1:A:3670:MET:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3822:GLN:OE1	1:A:3822:GLN:N	2.49	0.45
1:A:3905:ALA:HB1	1:A:3980:MET:HE3	1.99	0.45
1:A:4055:ASN:HD21	1:A:4057:ALA:HB3	1.82	0.45
1:F:793:LEU:HD11	1:F:867:ASN:HA	1.99	0.45
1:F:1261:LEU:HD21	1:F:1337:VAL:HA	1.98	0.45
1:F:1310:GLU:HG3	1:F:1312:CYS:H	1.81	0.45
1:F:1868:THR:O	1:F:1871:MET:HB2	2.17	0.45
1:F:1947:CYS:O	1:F:1951:VAL:HG13	2.16	0.45
1:F:2330:VAL:O	1:F:2330:VAL:HG13	2.17	0.45
1:F:3110:PHE:CD2	1:F:3135:LEU:HD11	2.52	0.45
1:F:3657:SER:HA	1:F:3660:ASN:OD1	2.17	0.45
1:F:3819:THR:HG22	1:F:3889:ARG:HH11	1.81	0.45
3:M:759:ASP:HB2	3:M:763:ASP:HB3	1.99	0.45
3:M:794:SER:HA	3:M:815:ARG:HD3	1.99	0.45
3:P:716:ASN:HA	3:P:745:HIS:CE1	2.52	0.45
1:A:45:SER:HB3	1:A:88:PHE:HZ	1.82	0.45
1:A:54:GLN:HB3	1:A:3097:ASP:HB2	1.98	0.45
1:A:1282:LEU:HB3	1:A:1359:LEU:HD13	1.98	0.45
1:A:1711:ARG:HG3	1:A:1712:ARG:HH21	1.81	0.45
1:A:1711:ARG:HH11	1:A:1757:MET:HE3	1.81	0.45
1:A:3148:GLN:NE2	1:A:3150:ASN:HA	2.30	0.45
1:A:3178:ILE:H	1:A:3178:ILE:HD12	1.81	0.45
1:A:3548:GLY:O	1:A:3552:LYS:HG2	2.17	0.45
1:A:3832:PRO:HB2	1:A:3836:PRO:HG3	1.98	0.45
1:F:479:ILE:HA	1:F:482:VAL:HG22	1.98	0.45
1:F:653:LEU:HB3	1:F:670:LEU:HD21	1.99	0.45
1:F:1060:PHE:HB3	1:F:1064:TYR:CZ	2.52	0.45
1:F:1322:THR:OG1	1:F:1324:PRO:HD2	2.16	0.45
1:F:1359:LEU:HA	1:F:1362:ASP:CG	2.37	0.45
1:F:1653:LEU:HB3	1:F:1698:PHE:CE1	2.51	0.45
1:F:2971:GLN:HA	1:F:2974:GLU:OE2	2.17	0.45
1:F:3247:ARG:NH2	1:F:3248:LYS:HG3	2.30	0.45
1:F:3465:PHE:O	1:F:3468:LEU:HB3	2.17	0.45
2:L:40:HIS:O	2:L:119:PRO:HB2	2.16	0.45
3:M:671:ASP:OD1	3:M:672:SER:N	2.48	0.45
1:A:131:LEU:HD12	1:A:173:LYS:HB2	1.99	0.45
1:A:181:LEU:HD12	1:A:185:HIS:HB2	1.99	0.45
1:A:208:MET:SD	1:A:256:ILE:HD12	2.57	0.45
1:A:2294:ILE:HD12	1:A:2299:TYR:CD1	2.51	0.45
1:A:2464:HIS:CE1	1:A:2466:SER:HB3	2.52	0.45
1:F:208:MET:CE	1:F:252:VAL:HG11	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:465:PHE:HA	1:F:468:LEU:HG	1.98	0.45
1:F:983:LEU:HB3	1:F:2591:ILE:HD11	1.98	0.45
1:F:1341:ILE:O	1:F:1345:THR:HG23	2.17	0.45
1:F:1539:SER:HA	1:F:1552:HIS:CE1	2.51	0.45
1:F:1745:LYS:HA	1:F:1748:ASP:OD2	2.16	0.45
1:F:1836:LEU:HD13	1:F:1883:ARG:HG3	1.99	0.45
1:F:1869:LYS:HB3	1:F:1873:TYR:CZ	2.52	0.45
1:F:2102:LYS:O	1:F:2106:ARG:HG2	2.16	0.45
1:F:2431:ARG:HA	1:F:2434:VAL:HG22	1.98	0.45
1:F:3122:HIS:O	1:F:3126:LEU:HG	2.17	0.45
1:F:3148:GLN:NE2	1:F:3150:ASN:HD21	2.15	0.45
1:F:3499:ILE:O	1:F:3503:VAL:HG12	2.16	0.45
1:F:3920:ILE:HA	1:F:3944:HIS:O	2.16	0.45
2:K:7:ARG:HH21	2:L:135:ALA:HB2	1.82	0.45
2:K:107:ARG:O	4:R:64:ARG:NH2	2.49	0.45
3:M:787:GLN:HG3	3:M:792:MET:HE2	1.99	0.45
2:N:144:LEU:HD22	2:O:145:GLN:HA	1.98	0.45
2:O:63:LYS:O	2:O:67:VAL:HG22	2.15	0.45
2:O:158:VAL:O	2:O:161:ARG:HG2	2.17	0.45
9:E:39:DA:C6	9:E:40:DT:O4	2.69	0.45
10:I:42:DA:H3'	10:I:43:DT:O4'	2.17	0.45
1:A:584:GLU:N	1:A:613:HIS:O	2.50	0.45
1:A:1175:HIS:HA	1:A:1178:ARG:CZ	2.46	0.45
1:A:1724:MET:HG3	1:A:1725:GLN:HG2	1.99	0.45
1:A:2452:ARG:HD3	1:A:2494:ASP:HB3	1.99	0.45
1:A:2564:GLU:O	1:A:2567:SER:OG	2.24	0.45
1:A:3548:GLY:O	1:A:3552:LYS:NZ	2.43	0.45
1:A:3638:LYS:NZ	1:A:3642:LYS:HE2	2.29	0.45
1:A:3825:LYS:O	1:A:3829:LEU:HB2	2.17	0.45
1:A:4083:GLY:HA3	1:A:4088:ASN:HB3	1.99	0.45
1:F:131:LEU:HD12	1:F:173:LYS:HB2	1.99	0.45
1:F:1416:GLU:HA	1:F:1419:LEU:HB3	1.97	0.45
1:F:2225:HIS:CG	1:F:2230:VAL:HG23	2.52	0.45
1:F:2301:GLN:HA	1:F:2304:VAL:HG22	1.99	0.45
1:F:2825:THR:O	1:F:2829:LYS:HG3	2.17	0.45
1:F:2893:LEU:HB2	1:F:2926:LEU:HD21	1.98	0.45
1:F:3159:ARG:HA	1:F:3162:ASN:ND2	2.32	0.45
1:F:3230:LEU:O	1:F:3233:SER:OG	2.29	0.45
1:F:3998:LEU:O	1:F:4001:THR:HG22	2.17	0.45
2:K:53:SER:HA	2:K:63:LYS:NZ	2.32	0.45
2:K:84:TYR:HE1	2:K:101:LEU:HA	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:28:LEU:HB2	2:N:67:VAL:HG13	1.98	0.45
2:N:48:SER:OG	2:N:51:GLU:OE2	2.34	0.45
2:N:53:SER:HB3	4:Q:64:ARG:HH12	1.82	0.45
2:O:69:GLU:HB3	2:O:99:LYS:HG2	1.99	0.45
2:O:179:ARG:HD3	3:P:778:PHE:HB3	1.98	0.45
4:R:9:LEU:HD22	4:R:134:HIS:ND1	2.32	0.45
4:R:12:PRO:HB3	4:R:215:GLN:HB2	1.98	0.45
9:E:20:DT:H6	9:E:20:DT:H2'	1.62	0.45
9:E:35:DT:H2''	9:E:36:DA:C8	2.52	0.45
1:A:722:LYS:HG3	1:A:1024:THR:HB	1.98	0.45
1:A:786:GLN:N	1:A:787:PRO:HD2	2.32	0.45
1:A:953:GLN:N	1:A:956:PRO:HG3	2.31	0.45
1:A:1272:GLY:HA2	1:A:1351:THR:HG21	1.99	0.45
1:A:2121:ASP:N	1:A:2121:ASP:OD1	2.48	0.45
1:A:2245:TRP:O	1:A:2246:LYS:HE2	2.16	0.45
1:A:3002:TYR:CZ	1:A:3013:TYR:HB3	2.51	0.45
1:A:3923:ARG:O	1:A:4124:TRP:HA	2.17	0.45
1:A:4014:LYS:HG3	1:A:4015:ASN:ND2	2.32	0.45
1:F:886:TRP:CZ3	1:F:911:LEU:HB3	2.52	0.45
1:F:1368:LEU:HD12	1:F:1369:MET:N	2.31	0.45
1:F:1483:LEU:HD21	1:F:1515:LEU:HD23	1.99	0.45
1:F:1816:ARG:HA	1:F:1819:PHE:CD2	2.52	0.45
1:F:2723:THR:O	1:F:2727:ARG:N	2.36	0.45
1:F:3128:LYS:O	1:F:3131:SER:OG	2.28	0.45
1:F:3273:LEU:O	1:F:3277:VAL:HG23	2.16	0.45
1:F:3617:LEU:CD2	1:F:3633:ILE:HG22	2.47	0.45
1:F:3873:LYS:O	1:F:3877:LYS:CB	2.63	0.45
1:F:3880:ALA:HB1	1:F:3969:ASN:ND2	2.32	0.45
3:P:722:LYS:HA	3:P:722:LYS:HD3	1.72	0.45
4:R:5:GLU:HB3	4:R:130:LEU:HD22	1.99	0.45
9:E:28:DT:H5''	9:E:28:DT:H6	1.82	0.45
11:J:25:DT:H6	11:J:26:DT:C4	2.35	0.45
1:A:1294:VAL:HG13	1:A:1368:LEU:HD11	1.99	0.44
1:A:1348:LEU:O	1:A:1352:SER:HB2	2.17	0.44
1:A:2188:GLU:HG3	1:A:2728:LEU:HD11	1.99	0.44
1:A:2564:GLU:OE2	1:A:2795:GLN:NE2	2.46	0.44
1:F:67:VAL:HG12	1:F:71:LYS:HE3	1.98	0.44
1:F:410:MET:N	1:F:411:PRO:HD2	2.31	0.44
1:F:535:LEU:HB3	1:F:637:LYS:HG3	1.99	0.44
1:F:560:LEU:O	1:F:564:LEU:HG	2.16	0.44
1:F:1371:VAL:HA	1:F:1374:GLN:CD	2.37	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1693:VAL:HG11	1:F:1746:PHE:CD1	2.52	0.44
1:F:2571:ASP:OD1	1:F:2571:ASP:N	2.50	0.44
1:F:2936:TYR:HA	1:F:2939:LEU:HD12	1.99	0.44
1:F:3971:MET:SD	1:F:3974:MET:HB3	2.57	0.44
3:M:794:SER:HA	3:M:815:ARG:CD	2.47	0.44
2:N:168:ALA:HB1	3:P:810:LEU:HD11	1.99	0.44
3:P:722:LYS:HB2	3:P:742:PHE:HB2	1.99	0.44
4:Q:211:VAL:HG23	4:Q:212:MET:SD	2.57	0.44
8:D:23:DT:H3	9:E:34:DC:H41	1.65	0.44
9:E:38:DT:N3	9:E:39:DA:N3	2.65	0.44
1:A:100:ILE:HD12	1:A:103:TYR:CD1	2.53	0.44
1:A:234:PHE:CD1	1:A:235:THR:HG23	2.53	0.44
1:A:475:LEU:O	1:A:479:ILE:HG12	2.18	0.44
1:A:1611:GLN:HB2	1:A:1613:HIS:ND1	2.33	0.44
1:A:2347:LYS:HE2	1:A:2347:LYS:HB2	1.67	0.44
1:A:2411:LEU:HD21	1:A:2442:MET:CG	2.48	0.44
1:A:2835:LYS:HA	1:A:2838:GLN:OE1	2.18	0.44
1:A:3360:LEU:HD23	1:A:3373:VAL:HG11	1.99	0.44
1:A:4102:THR:O	1:A:4105:LYS:HG2	2.18	0.44
1:F:79:ARG:HG2	1:F:79:ARG:HH11	1.82	0.44
1:F:162:LEU:HG	1:F:164:LYS:H	1.81	0.44
1:F:316:LEU:O	1:F:320:LEU:HG	2.17	0.44
1:F:1017:ILE:HG23	1:F:1077:GLY:C	2.38	0.44
1:F:1444:ASP:N	1:F:1444:ASP:OD1	2.50	0.44
1:F:2149:LEU:O	1:F:2152:ASN:N	2.49	0.44
1:F:2485:ARG:NH1	1:F:2530:ARG:HG2	2.32	0.44
1:F:2756:GLU:HG3	1:F:2760:GLU:OE2	2.17	0.44
1:F:3258:LEU:O	1:F:3261:GLU:HG2	2.17	0.44
1:F:3454:LEU:HD13	1:F:3461:ALA:HB3	1.99	0.44
2:K:95:PHE:HE1	2:K:97:PHE:HB3	1.82	0.44
2:K:180:PHE:O	2:K:184:LEU:HG	2.17	0.44
2:N:133:THR:O	2:N:136:GLU:HG3	2.17	0.44
3:P:865:ILE:HD12	3:P:872:VAL:HG22	1.99	0.44
4:R:142:MET:N	4:R:221:VAL:HG13	2.32	0.44
8:D:22:DG:H5"	9:E:33:DA:H61	1.81	0.44
1:A:38:LEU:CD2	1:A:85:ILE:HG13	2.46	0.44
1:A:111:CYS:HA	1:A:114:VAL:HB	1.99	0.44
1:A:487:LEU:HD21	1:A:568:PHE:CE1	2.53	0.44
1:A:958:MET:HB2	1:A:961:LEU:HD12	1.99	0.44
1:A:1098:GLN:HA	1:A:1151:ARG:HG2	1.99	0.44
1:A:1228:GLY:O	1:A:1233:SER:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1586:SER:HB2	1:A:1593:VAL:HG21	1.99	0.44
1:A:1727:ARG:NH1	1:A:1727:ARG:HA	2.33	0.44
1:A:2093:CYS:O	1:A:2096:PRO:HD2	2.17	0.44
1:A:3008:TRP:HA	1:A:3011:LEU:HD12	1.99	0.44
1:A:3577:GLN:HE22	1:A:3630:ARG:HD3	1.83	0.44
1:A:3809:THR:OG1	1:A:3810:VAL:N	2.51	0.44
1:A:3984:MET:HB3	1:A:4104:VAL:HG11	1.99	0.44
1:F:108:LYS:HZ2	1:F:148:LYS:HB2	1.82	0.44
1:F:301:CYS:O	1:F:309:LYS:NZ	2.31	0.44
1:F:538:ASP:HA	1:F:541:MET:CG	2.44	0.44
1:F:639:ALA:HA	1:F:642:PHE:HB3	1.99	0.44
1:F:1037:LEU:O	1:F:1040:SER:OG	2.23	0.44
1:F:1100:VAL:HG23	1:F:1101:PHE:N	2.32	0.44
1:F:1294:VAL:HA	1:F:1297:PHE:CE2	2.51	0.44
1:F:2255:LEU:O	1:F:2258:GLU:HG2	2.17	0.44
1:F:2955:SER:O	1:F:2958:LEU:HG	2.16	0.44
1:F:3349:ALA:HA	1:F:3352:GLU:HB3	1.99	0.44
1:F:3419:PHE:O	1:F:3423:GLN:HG2	2.17	0.44
1:F:3516:HIS:O	1:F:3520:GLU:OE1	2.35	0.44
1:F:4059:ILE:HA	1:F:4062:ASP:OD2	2.17	0.44
2:K:145:GLN:HA	2:L:144:LEU:HD11	1.98	0.44
2:N:41:SER:N	2:N:119:PRO:HG3	2.32	0.44
2:N:95:PHE:O	2:N:111:PHE:N	2.46	0.44
2:O:3:ARG:HH22	2:O:122:VAL:HG13	1.82	0.44
3:P:681:ARG:NH2	3:P:730:PHE:HB3	2.31	0.44
4:R:23:LEU:HD13	4:R:45:TRP:CE3	2.52	0.44
4:R:105:ILE:HA	4:R:123:CYS:HB2	1.98	0.44
10:I:31:DA:H4'	10:I:32:DA:H5'	1.99	0.44
11:J:25:DT:H5''	11:J:26:DT:H73	1.98	0.44
1:A:83:GLU:HG2	1:A:129:ASP:OD2	2.17	0.44
1:A:301:CYS:HB3	1:A:312:ALA:HB3	1.98	0.44
1:A:639:ALA:HB2	1:A:676:ASN:HB3	1.99	0.44
1:A:1525:CYS:O	1:A:1529:VAL:HG23	2.17	0.44
1:A:1603:GLN:HB2	1:A:1606:ARG:HH21	1.82	0.44
1:A:1649:LEU:HA	1:A:1652:ILE:HD12	1.99	0.44
1:A:3835:PRO:O	1:A:3840:LYS:N	2.38	0.44
1:F:265:TYR:O	1:F:268:PRO:HD2	2.18	0.44
1:F:1000:LYS:HD3	1:F:1000:LYS:HA	1.84	0.44
1:F:1037:LEU:HD12	1:F:1038:LYS:N	2.32	0.44
1:F:1935:GLU:OE1	1:F:1935:GLU:N	2.47	0.44
1:F:2572:TYR:CE1	1:F:2791:ILE:HD11	2.40	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2586:PHE:CD1	1:F:2778:GLY:HA3	2.50	0.44
1:F:2817:LEU:O	1:F:2820:MET:HG3	2.17	0.44
1:F:2840:PHE:HD1	1:F:2843:PHE:HD2	1.66	0.44
1:F:3369:ASP:O	1:F:3373:VAL:HG23	2.17	0.44
1:F:3586:LYS:HE3	1:F:3668:LEU:HB3	2.00	0.44
1:F:4075:ARG:HA	1:F:4078:VAL:HG22	1.99	0.44
2:K:19:PHE:HE2	2:L:127:ILE:HG12	1.80	0.44
2:O:118:ASN:HB3	2:O:121:GLU:HB2	1.98	0.44
3:P:707:ILE:H	3:P:707:ILE:HD12	1.82	0.44
4:Q:50:ASP:OD1	4:Q:52:SER:OG	2.35	0.44
1:A:391:ARG:HA	1:A:394:GLN:OE1	2.17	0.44
1:A:472:GLY:O	1:A:475:LEU:HB3	2.18	0.44
1:A:723:ASP:C	1:A:725:LEU:N	2.71	0.44
1:A:1303:MET:N	1:A:1303:MET:SD	2.91	0.44
1:A:1851:LEU:HG	1:A:1852:LYS:HD3	2.00	0.44
1:A:2539:LEU:O	1:A:2542:LEU:HG	2.17	0.44
1:A:2574:ASN:C	1:A:2786:LYS:HG3	2.38	0.44
1:A:3878:VAL:HG11	1:A:4127:TRP:O	2.18	0.44
1:A:4091:ALA:HB1	1:A:4106:CYS:SG	2.57	0.44
1:F:35:ILE:HG12	1:F:36:ARG:NH2	2.32	0.44
1:F:230:LEU:HA	1:F:230:LEU:HD12	1.71	0.44
1:F:471:LYS:HB3	1:F:474:VAL:HB	2.00	0.44
1:F:643:GLU:HG2	1:F:644:PRO:HD3	2.00	0.44
1:F:1597:LEU:O	1:F:1601:LEU:HG	2.17	0.44
1:F:2577:PHE:HB2	1:F:2783:ILE:HG22	1.98	0.44
1:F:2830:ASN:O	1:F:2834:GLN:HG2	2.18	0.44
1:F:3058:ASP:OD1	1:F:3060:SER:N	2.50	0.44
1:F:3239:LYS:HD3	1:F:3258:LEU:HD11	1.98	0.44
1:F:3285:HIS:O	1:F:3288:SER:OG	2.21	0.44
1:F:4060:THR:O	1:F:4064:LEU:HG	2.18	0.44
1:F:4102:THR:HA	1:F:4105:LYS:HG2	1.99	0.44
2:K:3:ARG:HB2	2:K:129:TYR:CE2	2.53	0.44
2:K:84:TYR:CE1	2:K:99:LYS:HG3	2.52	0.44
4:R:36:LEU:HB3	4:R:47:GLU:H	1.83	0.44
1:A:51:LEU:HB3	1:A:3101:TYR:HD1	1.83	0.44
1:A:364:ARG:HH22	1:A:463:LYS:HZ2	1.65	0.44
1:A:801:LYS:NZ	1:A:920:THR:O	2.51	0.44
1:A:1790:SER:O	1:A:1794:GLN:HG3	2.18	0.44
1:A:2203:THR:HB	1:A:2247:ASP:OD2	2.18	0.44
1:A:2321:GLU:O	1:A:2325:LEU:HG	2.17	0.44
1:A:2351:GLN:O	1:A:2352:HIS:ND1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2749:ALA:O	1:A:2753:ARG:HG2	2.17	0.44
1:A:3658:ASP:N	1:A:3658:ASP:OD1	2.50	0.44
1:A:4047:ALA:HA	1:A:4050:LYS:HE2	1.99	0.44
1:A:4105:LYS:HA	1:A:4108:MET:HG3	1.99	0.44
1:F:175:TYR:HB2	1:F:223:CYS:HB3	2.00	0.44
1:F:295:GLU:O	1:F:299:LYS:NZ	2.45	0.44
1:F:305:ASN:O	1:F:308:LEU:N	2.48	0.44
1:F:966:PHE:CD2	1:F:1007:VAL:HG12	2.53	0.44
1:F:994:TRP:CE2	1:F:1000:LYS:HG3	2.52	0.44
1:F:1821:ASP:HA	1:F:1875:LYS:HZ1	1.81	0.44
1:F:2242:VAL:O	1:F:2246:LYS:HG3	2.18	0.44
1:F:2539:LEU:HD12	1:F:2542:LEU:HD11	2.00	0.44
1:F:3628:PHE:CE1	1:F:3632:PHE:HE2	2.36	0.44
1:F:3701:ILE:HB	1:F:3704:GLN:NE2	2.31	0.44
1:F:3834:ALA:HB1	1:F:3839:TYR:CZ	2.53	0.44
3:P:820:LEU:HD23	3:P:845:LEU:HD11	1.98	0.44
4:Q:104:LEU:O	4:Q:123:CYS:HB3	2.17	0.44
1:A:996:THR:HG23	1:A:1043:GLN:OE1	2.18	0.44
1:A:1136:ARG:HA	1:A:1139:GLU:OE2	2.18	0.44
1:A:1623:LEU:HD11	1:A:1671:VAL:HG21	2.00	0.44
1:A:1963:GLN:OE1	1:A:2125:TRP:N	2.51	0.44
1:A:2187:VAL:HG12	1:A:2728:LEU:HD13	1.98	0.44
1:A:2746:LYS:HD3	1:A:2746:LYS:N	2.33	0.44
1:A:3382:PHE:HB2	1:A:3419:PHE:CZ	2.52	0.44
1:A:3462:ARG:HB3	1:A:3498:TRP:CZ3	2.53	0.44
1:F:145:ASP:HB2	1:F:148:LYS:HZ1	1.83	0.44
1:F:721:TYR:C	1:F:722:LYS:HD2	2.38	0.44
1:F:1208:LEU:HD22	1:F:1275:THR:O	2.18	0.44
1:F:2228:ARG:HD2	10:I:44:DG:H3'	1.99	0.44
1:F:2350:LYS:HD2	1:F:2354:ASN:OD1	2.18	0.44
1:F:2995:GLU:O	1:F:2999:LEU:HG	2.17	0.44
1:F:3348:LEU:HD13	1:F:3351:ILE:HD12	1.99	0.44
1:F:3420:CYS:SG	1:F:3421:ASP:N	2.89	0.44
1:F:3571:PHE:CE2	1:F:3575:LEU:HD11	2.53	0.44
1:F:3675:LYS:NZ	1:F:3676:PRO:O	2.32	0.44
1:F:3699:LEU:HD23	1:F:3719:ILE:HD12	1.99	0.44
2:K:72:LYS:HB2	2:K:78:ALA:HB2	2.00	0.44
2:K:127:ILE:HG23	2:L:19:PHE:CE2	2.52	0.44
2:O:69:GLU:HG3	2:O:104:VAL:HG21	2.00	0.44
3:P:702:ALA:O	3:P:723:PRO:HD3	2.17	0.44
3:P:706:ASN:O	3:P:709:VAL:HB	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:P:748:PRO:HA	3:P:751:LYS:HD2	2.00	0.44
3:P:753:HIS:O	3:P:757:GLU:HG2	2.17	0.44
3:P:815:ARG:H	3:P:850:ALA:N	2.16	0.44
4:Q:146:LEU:HB3	4:R:150:VAL:HG11	1.98	0.44
4:R:37:LEU:HG	4:R:135:LEU:HD11	2.00	0.44
11:J:20:DT:C4	11:J:21:DA:C5	3.05	0.44
1:A:1058:SER:HA	1:A:1061:LYS:HE2	1.98	0.44
1:A:1080:LEU:HA	1:A:1083:ASN:ND2	2.33	0.44
1:A:1952:ILE:HA	1:A:1955:VAL:O	2.18	0.44
1:A:2322:VAL:HA	1:A:2325:LEU:HD12	2.00	0.44
1:A:2339:GLU:HA	1:A:2342:CYS:SG	2.57	0.44
1:A:3632:PHE:HA	1:A:3635:THR:OG1	2.18	0.44
1:F:88:PHE:CD2	1:F:89:LEU:HD22	2.53	0.44
1:F:336:ASN:HB3	1:F:340:TYR:CZ	2.52	0.44
1:F:651:TYR:O	1:F:655:LEU:HG	2.18	0.44
1:F:1428:ILE:HD12	1:F:1431:LEU:HB2	1.99	0.44
1:F:2924:VAL:HG21	1:F:2989:ALA:HB1	1.99	0.44
1:F:3314:SER:OG	1:F:3318:LYS:HG2	2.17	0.44
1:F:3940:ILE:HG22	1:F:3941:ASP:N	2.31	0.44
1:F:3964:THR:HG22	1:F:3967:PHE:CD2	2.53	0.44
2:K:88:PHE:HB2	2:K:95:PHE:HD2	1.82	0.44
3:P:657:ASN:HA	3:P:660:GLU:HG3	2.00	0.44
4:Q:8:LEU:HD21	4:Q:37:LEU:CB	2.47	0.44
9:E:40:DT:H1'	9:E:41:DT:O4'	2.18	0.44
1:A:23:ASP:HB2	1:A:70:ARG:HE	1.83	0.44
1:A:621:SER:O	1:A:624:ILE:HG12	2.17	0.44
1:A:738:HIS:N	1:A:775:GLU:OE2	2.51	0.44
1:A:899:ARG:HH11	1:A:2569:SER:N	2.16	0.44
1:A:933:LEU:HB2	1:A:2793:PRO:HB2	1.99	0.44
1:A:1118:GLU:OE2	1:A:1120:SER:OG	2.22	0.44
1:A:1226:GLY:HA3	1:A:1259:LEU:HG	2.00	0.44
1:A:2133:LEU:HB2	1:A:2146:LEU:HD13	2.00	0.44
1:A:2300:PHE:HB2	1:A:2341:LEU:HD22	1.99	0.44
1:A:2342:CYS:C	1:A:2377:ARG:HH12	2.21	0.44
1:A:2356:MET:HE1	1:A:2359:LYS:H	1.83	0.44
1:A:2567:SER:HA	1:A:2572:TYR:CD2	2.52	0.44
1:A:3897:PHE:CZ	1:A:3901:ARG:HD3	2.53	0.44
1:F:286:LEU:HD12	1:F:319:PHE:CD1	2.53	0.44
1:F:699:GLU:O	1:F:702:SER:OG	2.35	0.44
1:F:998:ASN:OD1	1:F:999:LYS:N	2.51	0.44
1:F:1101:PHE:HB2	1:F:1154:PRO:HG3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1881:TYR:HE1	1:F:1953:CYS:HG	1.64	0.44
1:F:2260:PHE:CE2	1:F:2277:LEU:HD21	2.52	0.44
1:F:2348:GLN:HA	1:F:2352:HIS:CE1	2.53	0.44
1:F:2757:ILE:O	1:F:2761:LEU:HG	2.17	0.44
1:F:3252:PHE:CE1	1:F:3287:ARG:HA	2.53	0.44
1:F:3442:TYR:O	1:F:3445:LEU:HG	2.17	0.44
1:F:3549:HIS:CE1	1:F:3550:LYS:HD2	2.53	0.44
1:F:3961:PHE:CE2	1:F:3963:LEU:HB2	2.53	0.44
2:K:7:ARG:NH2	2:L:135:ALA:HB2	2.33	0.44
2:L:159:GLN:OE1	3:M:840:ILE:HD11	2.18	0.44
3:M:889:LEU:HD11	3:M:906:GLU:OE1	2.18	0.44
3:P:810:LEU:HD22	3:P:848:HIS:ND1	2.33	0.44
3:P:856:LEU:HD11	3:P:878:PHE:CG	2.53	0.44
4:R:28:PHE:HB3	4:R:35:ALA:HB3	2.00	0.44
1:A:101:ALA:O	1:A:104:SER:OG	2.29	0.43
1:A:275:PHE:CD2	1:A:315:ALA:HB1	2.53	0.43
1:A:1785:ILE:HA	1:A:1788:ARG:HB2	2.00	0.43
1:A:2269:ASP:O	1:A:2272:VAL:HG22	2.17	0.43
1:A:2362:VAL:O	1:A:2366:LYS:HG2	2.18	0.43
1:A:3014:CYS:O	1:A:3016:THR:HG23	2.17	0.43
1:A:3236:PHE:HD2	1:A:3269:ARG:NH2	2.15	0.43
1:A:3314:SER:OG	1:A:3318:LYS:N	2.51	0.43
1:A:3974:MET:HE1	1:A:3979:LEU:N	2.33	0.43
1:F:85:ILE:O	1:F:89:LEU:HD23	2.18	0.43
1:F:168:ASP:OD1	1:F:169:THR:N	2.51	0.43
1:F:890:LYS:HB3	1:F:906:PHE:CG	2.53	0.43
1:F:1147:LYS:HZ3	1:F:1149:LYS:HB2	1.83	0.43
1:F:1179:PRO:HG3	1:F:1259:LEU:HD13	1.99	0.43
1:F:1406:LEU:HD22	1:F:1415:LEU:HD11	2.00	0.43
1:F:2333:ARG:HA	1:F:2333:ARG:HD3	1.64	0.43
1:F:2954:GLN:HA	1:F:2957:LEU:HD12	2.00	0.43
1:F:2987:THR:HG23	1:F:2989:ALA:H	1.83	0.43
1:F:3076:ALA:O	1:F:3080:LEU:HG	2.17	0.43
1:F:3078:LEU:HA	1:F:3082:TYR:HD2	1.83	0.43
1:F:3364:GLY:HA3	1:F:3373:VAL:HG13	2.00	0.43
1:F:3459:ASN:O	1:F:3462:ARG:HB2	2.18	0.43
1:F:3662:ILE:O	1:F:3666:LEU:HG	2.18	0.43
1:F:3924:HIS:NE2	1:F:3926:ASN:HB2	2.32	0.43
2:K:53:SER:HA	2:K:63:LYS:HZ3	1.82	0.43
2:K:94:TYR:HB2	2:K:111:PHE:O	2.18	0.43
3:M:720:VAL:O	3:M:743:MET:HA	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:N:51:GLU:HA	4:Q:64:ARG:HD2	2.00	0.43
4:Q:157:LEU:HD21	4:R:157:LEU:HA	2.00	0.43
4:R:109:ARG:NH2	4:R:120:ASN:HD22	2.16	0.43
1:A:54:GLN:HA	1:A:57:LEU:HG	2.00	0.43
1:A:222:GLY:HA2	1:A:225:LYS:HE3	1.99	0.43
1:A:391:ARG:HB3	1:A:395:MET:HE1	2.00	0.43
1:A:933:LEU:O	1:A:936:SER:OG	2.28	0.43
1:A:1115:HIS:HE1	1:A:1183:CYS:H	1.63	0.43
1:A:1356:TRP:HD1	1:A:1359:LEU:HD12	1.83	0.43
1:A:1369:MET:CE	1:A:1415:LEU:HA	2.47	0.43
1:A:1725:GLN:OE1	1:A:1769:GLU:HB3	2.18	0.43
1:A:1745:LYS:HA	1:A:1748:ASP:OD2	2.17	0.43
1:A:2251:ILE:HB	1:A:2253:TYR:CE2	2.54	0.43
1:A:2257:PHE:HB2	1:A:2299:TYR:HE1	1.82	0.43
1:A:2963:SER:OG	1:A:3250:ASN:O	2.36	0.43
1:A:2965:TYR:O	1:A:2969:ALA:N	2.43	0.43
1:A:2986:PRO:HG3	1:A:2994:TRP:CH2	2.53	0.43
1:A:2986:PRO:HG3	1:A:2994:TRP:HH2	1.83	0.43
1:A:3496:ILE:HB	1:A:3707:GLY:HA3	2.00	0.43
1:A:3699:LEU:HD12	1:A:3699:LEU:HA	1.83	0.43
1:F:344:GLN:O	1:F:348:ILE:HG12	2.18	0.43
1:F:485:GLN:O	1:F:485:GLN:NE2	2.51	0.43
1:F:847:SER:OG	1:F:848:LEU:N	2.49	0.43
1:F:1442:GLN:O	1:F:1446:SER:N	2.42	0.43
1:F:2586:PHE:CD2	1:F:2782:ASP:HB3	2.52	0.43
1:F:3044:MET:HB3	1:F:3048:LYS:NZ	2.32	0.43
1:F:3269:ARG:NH2	1:F:3272:TRP:HB2	2.33	0.43
1:F:3471:ILE:HA	1:F:3474:ARG:HG2	1.98	0.43
2:N:45:GLY:HA3	2:N:113:LEU:HA	2.01	0.43
2:N:154:ASP:HB3	2:O:155:TRP:CD1	2.53	0.43
2:N:179:ARG:HB3	3:P:805:TRP:CZ2	2.53	0.43
2:O:27:THR:OG1	2:O:30:SER:OG	2.36	0.43
4:R:84:LEU:HD22	4:R:95:PHE:HB2	2.00	0.43
4:R:154:ALA:HB1	4:R:186:GLU:HB2	1.99	0.43
9:E:45:DG:H21	9:E:45:DG:P	2.40	0.43
1:A:88:PHE:HA	1:A:91:ILE:HG12	2.00	0.43
1:A:320:LEU:HA	1:A:323:VAL:HG22	2.00	0.43
1:A:411:PRO:HB3	1:A:457:CYS:HA	2.01	0.43
1:A:1715:GLU:HA	1:A:1718:ILE:HG12	1.98	0.43
1:A:2140:LEU:HA	1:A:2143:ARG:HG2	1.99	0.43
1:A:2405:VAL:HA	1:A:2408:MET:HE2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2586:PHE:HB3	1:A:2776:ARG:O	2.16	0.43
1:A:3301:LEU:HD13	1:A:3333:THR:OG1	2.19	0.43
1:A:3679:ASN:HB3	1:A:3724:GLU:O	2.18	0.43
1:A:3749:PRO:HG2	1:A:3805:TRP:HB3	2.00	0.43
1:F:652:GLU:OE1	1:F:653:LEU:HD22	2.19	0.43
1:F:745:VAL:HG21	1:F:788:TYR:OH	2.18	0.43
1:F:939:MET:HE1	1:F:2782:ASP:N	2.33	0.43
1:F:1274:ARG:HH11	1:F:1351:THR:HB	1.83	0.43
1:F:2154:GLU:OE2	1:F:2195:SER:HB2	2.18	0.43
1:F:2228:ARG:HG3	1:F:2229:ALA:H	1.84	0.43
1:F:2812:LEU:HD12	1:F:2813:PHE:N	2.34	0.43
1:F:3444:ALA:HB2	1:F:3478:GLU:HG3	2.00	0.43
1:F:3586:LYS:O	1:F:3590:ASN:ND2	2.51	0.43
1:F:3718:ARG:H	1:F:3743:HIS:CE1	2.36	0.43
2:K:184:LEU:HD21	2:L:183:VAL:HG13	2.01	0.43
2:L:28:LEU:HD12	2:L:32:PHE:CG	2.53	0.43
3:M:708:ARG:O	3:M:712:ILE:HG12	2.18	0.43
3:M:725:TRP:HD1	3:M:742:PHE:CD2	2.35	0.43
4:R:62:ASN:OD1	4:R:119:TRP:HA	2.18	0.43
8:D:33:DA:H5''	8:D:33:DA:C8	2.53	0.43
1:A:11:SER:O	1:A:15:LEU:HD23	2.18	0.43
1:A:225:LYS:NZ	1:A:267:VAL:HG12	2.33	0.43
1:A:438:LEU:O	1:A:441:MET:HG3	2.18	0.43
1:A:896:VAL:HG13	1:A:903:PRO:HD2	2.00	0.43
1:A:933:LEU:HD12	1:A:2793:PRO:C	2.38	0.43
1:A:992:ILE:HG23	1:A:1036:PHE:HD1	1.83	0.43
1:A:1357:LYS:O	1:A:1360:LYS:HB3	2.19	0.43
1:A:1376:LEU:HD12	1:A:1399:CYS:SG	2.58	0.43
1:A:1862:THR:HG22	1:A:1865:THR:H	1.83	0.43
1:A:2272:VAL:HA	1:A:2275:GLN:HG2	2.00	0.43
1:A:2328:ARG:HG2	1:A:2329:TYR:CE1	2.53	0.43
1:A:3058:ASP:OD1	1:A:3059:GLN:N	2.52	0.43
1:A:3111:MET:SD	1:A:3112:GLN:N	2.92	0.43
1:A:3381:ALA:O	1:A:3385:LEU:HG	2.17	0.43
1:A:4010:SER:HA	1:A:4038:TRP:CZ2	2.54	0.43
1:F:188:GLU:CD	1:F:192:ASN:HD21	2.20	0.43
1:F:1104:LEU:O	1:F:1108:MET:HG2	2.18	0.43
1:F:1458:LEU:HD13	1:F:1467:ILE:HG21	1.99	0.43
1:F:1580:LEU:O	1:F:1584:GLN:HG2	2.19	0.43
1:F:2154:GLU:HA	1:F:2157:PHE:CZ	2.53	0.43
1:F:2575:PRO:HA	1:F:2785:ILE:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2855:VAL:O	1:F:2859:GLN:HG3	2.19	0.43
1:F:3185:ASN:HB3	1:F:3189:PHE:CZ	2.53	0.43
1:F:3590:ASN:OD1	1:F:3593:ARG:NH1	2.52	0.43
1:F:3628:PHE:HE1	1:F:3673:ASP:HB3	1.83	0.43
1:F:3631:LYS:O	1:F:3634:GLN:HG2	2.17	0.43
1:F:3814:ASP:HA	1:F:3817:LEU:HB3	2.01	0.43
2:L:34:ILE:H	2:L:47:VAL:HG21	1.82	0.43
2:L:38:ASP:OD1	2:L:39:GLY:N	2.52	0.43
2:L:169:LYS:HD3	3:M:810:LEU:HD12	1.99	0.43
4:Q:56:GLN:NE2	4:Q:60:GLU:HB3	2.34	0.43
8:D:37:DG:C8	9:E:19:DC:H2"	2.54	0.43
1:A:74:ASN:HA	1:A:79:ARG:HD2	2.00	0.43
1:A:1101:PHE:HB2	1:A:1154:PRO:HG3	2.01	0.43
1:A:2353:GLN:HG2	1:A:2356:MET:SD	2.59	0.43
1:A:2449:VAL:HA	1:A:2452:ARG:NE	2.33	0.43
1:A:2737:GLU:HG2	1:A:2740:SER:HB2	2.00	0.43
1:A:2940:ARG:NH1	1:A:3981:TYR:HB3	2.33	0.43
1:F:188:GLU:O	1:F:192:ASN:ND2	2.52	0.43
1:F:715:ALA:O	1:F:718:MET:HG3	2.18	0.43
1:F:892:LEU:HB2	1:F:908:ASP:OD1	2.18	0.43
1:F:1342:MET:O	1:F:1346:THR:HG23	2.17	0.43
1:F:2268:LYS:HB3	1:F:2315:VAL:HG22	2.00	0.43
1:F:2389:PHE:O	1:F:2394:LYS:HD3	2.19	0.43
1:F:3169:PRO:HB2	1:F:3179:TRP:CZ2	2.52	0.43
1:F:3442:TYR:HB3	1:F:3443:PRO:HD3	2.01	0.43
1:F:4013:TRP:HB2	1:F:4038:TRP:CD1	2.53	0.43
2:K:150:ARG:O	2:K:153:ARG:HG3	2.19	0.43
3:P:735:PHE:HZ	3:P:738:TRP:CZ2	2.36	0.43
3:P:856:LEU:HA	3:P:882:PHE:HE1	1.83	0.43
4:Q:14:ALA:N	4:Q:25:ALA:O	2.36	0.43
4:R:176:ARG:HA	4:R:176:ARG:NE	2.33	0.43
1:A:80:GLU:HG3	1:A:81:CYS:N	2.33	0.43
1:A:450:SER:OG	1:A:453:MET:HG3	2.18	0.43
1:A:461:ILE:O	1:A:464:VAL:HG22	2.19	0.43
1:A:623:PHE:O	1:A:626:LEU:HG	2.18	0.43
1:A:664:SER:O	1:A:668:LYS:HG3	2.18	0.43
1:A:1297:PHE:HA	1:A:1301:ILE:HG12	1.99	0.43
1:A:1511:ALA:HA	1:A:1514:LEU:HD12	2.01	0.43
1:A:1771:GLN:HE22	1:A:1774:MET:HA	1.84	0.43
1:A:1847:ALA:HA	1:A:1850:VAL:HG12	2.01	0.43
1:A:2090:ARG:HH22	1:A:2144:LEU:HD22	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3567:VAL:HG13	1:A:3686:TRP:CH2	2.53	0.43
1:A:3622:ALA:H	1:A:3630:ARG:CZ	2.31	0.43
1:F:153:PHE:HE2	1:F:192:ASN:ND2	2.16	0.43
1:F:732:PHE:O	1:F:735:SER:OG	2.22	0.43
1:F:1092:GLU:OE2	1:F:1094:SER:N	2.52	0.43
1:F:1239:PRO:O	1:F:1310:GLU:HA	2.18	0.43
1:F:1306:ILE:HG13	1:F:1307:ILE:H	1.84	0.43
1:F:2219:LEU:HD12	1:F:2220:MET:N	2.33	0.43
1:F:2243:GLU:HA	1:F:2246:LYS:HE3	1.99	0.43
1:F:2510:LEU:HD21	1:F:2525:TRP:HD1	1.82	0.43
1:F:3236:PHE:O	1:F:3240:MET:HG2	2.18	0.43
1:F:4102:THR:HG22	1:F:4105:LYS:HE3	2.01	0.43
2:K:118:ASN:HD21	2:K:120:ALA:HB3	1.83	0.43
2:K:146:LYS:O	2:K:149:GLU:HG2	2.19	0.43
3:M:722:LYS:NZ	3:M:723:PRO:HD2	2.34	0.43
3:P:728:GLU:OE1	3:P:741:ARG:NH2	2.52	0.43
4:Q:13:TRP:CD2	4:Q:24:LEU:HG	2.53	0.43
4:R:95:PHE:CE1	4:R:108:VAL:HA	2.54	0.43
1:A:75:SER:O	1:A:79:ARG:HG2	2.19	0.43
1:A:886:TRP:HZ3	1:A:911:LEU:HB3	1.84	0.43
1:A:1062:ARG:HH11	1:A:3745:GLU:HB2	1.82	0.43
1:A:1491:ILE:HG21	1:A:1558:TYR:CE2	2.54	0.43
1:A:2254:ARG:NH2	1:A:2293:GLY:H	2.16	0.43
1:A:2921:LEU:O	1:A:2925:GLU:HG3	2.19	0.43
1:A:3371:GLU:HA	1:A:3374:ILE:HG12	2.01	0.43
1:A:3588:TRP:HE1	1:A:3609:MET:HG3	1.83	0.43
1:A:3781:CYS:SG	1:A:3786:LEU:HB2	2.58	0.43
1:A:3924:HIS:NE2	1:A:3927:ASN:OD1	2.52	0.43
1:F:183:GLU:HG2	1:F:184:VAL:H	1.84	0.43
1:F:192:ASN:O	1:F:196:LEU:HG	2.17	0.43
1:F:242:PRO:HB2	1:F:246:ARG:HH21	1.83	0.43
1:F:651:TYR:CZ	1:F:655:LEU:HD11	2.53	0.43
1:F:1048:GLN:HA	1:F:1051:LYS:HG2	1.99	0.43
1:F:2158:ARG:HB2	1:F:2159:PRO:HD3	2.01	0.43
1:F:2269:ASP:OD1	1:F:2270:ASN:N	2.51	0.43
1:F:2306:ASN:HA	1:F:2309:PHE:HD2	1.84	0.43
1:F:2313:LYS:O	1:F:2317:ALA:CB	2.67	0.43
1:F:2973:ASP:O	1:F:2977:ASN:ND2	2.51	0.43
1:F:3041:LEU:O	1:F:3045:ILE:HG12	2.19	0.43
1:F:3140:GLU:O	1:F:3143:SER:OG	2.33	0.43
1:F:3228:SER:O	1:F:3231:ILE:HG12	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3299:THR:O	1:F:3299:THR:HG23	2.19	0.43
1:F:3482:LEU:O	1:F:3485:LYS:HG2	2.19	0.43
1:F:3488:SER:O	1:F:3491:PRO:HD3	2.19	0.43
2:K:33:VAL:HA	2:K:46:THR:HA	2.00	0.43
2:K:180:PHE:HE2	2:L:176:LEU:HB3	1.83	0.43
3:M:719:ASP:OD2	3:M:750:THR:OG1	2.36	0.43
3:M:817:THR:HA	3:M:851:LYS:HB2	2.00	0.43
2:O:24:TRP:CZ2	2:O:28:LEU:HD23	2.54	0.43
2:O:88:PHE:HB2	2:O:95:PHE:CE2	2.53	0.43
4:Q:18:LEU:HD12	4:Q:97:CYS:O	2.19	0.43
4:R:8:LEU:HD22	4:R:35:ALA:HB1	1.99	0.43
10:I:39:DA:C2	11:J:19:DA:C2	3.07	0.43
11:J:27:DT:H1'	11:J:28:DA:C2	2.54	0.43
1:A:40:GLN:CD	1:A:2427:ARG:HB2	2.39	0.43
1:A:645:TRP:HB3	1:A:649:PHE:CB	2.48	0.43
1:A:996:THR:HG21	1:A:1039:TRP:HD1	1.83	0.43
1:A:1623:LEU:HG	1:A:1667:SER:OG	2.18	0.43
1:A:2735:ASP:N	1:A:2735:ASP:OD1	2.52	0.43
1:A:2750:GLU:O	1:A:2754:GLU:OE1	2.37	0.43
1:F:122:LYS:HA	1:F:122:LYS:HD3	1.70	0.43
1:F:471:LYS:O	1:F:475:LEU:N	2.23	0.43
1:F:542:ASP:OD1	1:F:543:SER:N	2.51	0.43
1:F:710:PHE:HA	1:F:713:GLU:CD	2.39	0.43
1:F:925:GLN:CD	1:F:2769:VAL:HG13	2.39	0.43
1:F:1582:LEU:HD12	1:F:1583:MET:N	2.34	0.43
1:F:1661:PHE:CD1	1:F:1665:HIS:HB2	2.54	0.43
1:F:2446:LEU:HD11	1:F:2450:GLU:HB2	2.00	0.43
1:F:3705:TYR:HE1	1:F:3716:HIS:CE1	2.36	0.43
1:F:3855:TYR:HB3	1:F:3859:TYR:CZ	2.54	0.43
2:K:8:ILE:CG2	2:K:20:LEU:H	2.31	0.43
2:K:164:LYS:NZ	3:M:898:ILE:HA	2.34	0.43
2:L:134:ILE:HA	2:L:137:ASN:HD21	1.83	0.43
2:O:42:ALA:HB2	2:O:123:ILE:HG13	1.99	0.43
4:R:81:ARG:NH1	4:R:85:LYS:H	2.17	0.43
4:R:105:ILE:HD13	4:R:123:CYS:HB3	1.99	0.43
9:E:26:DA:H2	9:E:27:DC:H2'	1.78	0.43
1:A:42:CYS:HG	1:A:91:ILE:HD11	1.84	0.43
1:A:183:GLU:HG3	1:A:184:VAL:H	1.83	0.43
1:A:296:VAL:HG22	1:A:300:TRP:CD1	2.54	0.43
1:A:832:LYS:HG3	1:A:834:LEU:H	1.83	0.43
1:A:1069:HIS:NE2	1:A:3744:ASP:HA	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1479:VAL:HG11	1:A:1518:ALA:HA	2.00	0.43
1:A:1627:LYS:HA	1:A:1630:ASP:OD1	2.19	0.43
1:A:1872:GLY:O	1:A:1876:ILE:HG12	2.19	0.43
1:A:2245:TRP:HB3	1:A:2246:LYS:H	1.64	0.43
1:A:2304:VAL:HA	1:A:2307:MET:HG2	2.01	0.43
1:A:2386:LEU:O	1:A:2394:LYS:NZ	2.29	0.43
1:A:2854:PHE:O	1:A:2858:ILE:HG12	2.18	0.43
1:A:3270:ASP:OD1	1:A:3271:ASP:N	2.51	0.43
1:A:3297:VAL:O	1:A:3300:VAL:HG13	2.18	0.43
1:A:3347:CYS:O	1:A:3351:ILE:N	2.41	0.43
1:A:3864:ARG:O	1:A:3867:THR:HB	2.18	0.43
1:A:3958:LEU:HD22	1:A:4115:ASN:HD22	1.83	0.43
1:A:3974:MET:HE3	1:A:3978:GLY:H	1.83	0.43
1:F:856:VAL:HA	1:F:859:LEU:HD12	2.00	0.43
1:F:1173:LEU:HD12	1:F:1173:LEU:HA	1.83	0.43
1:F:1374:GLN:O	1:F:1378:GLU:N	2.29	0.43
1:F:1479:VAL:HG21	1:F:1518:ALA:HA	2.01	0.43
1:F:3749:PRO:O	1:F:3805:TRP:HB3	2.19	0.43
1:F:3880:ALA:HA	1:F:3966:GLN:OE1	2.19	0.43
3:M:846:ARG:NH2	3:M:852:VAL:HG21	2.34	0.43
2:O:46:THR:O	2:O:112:ASN:HB2	2.19	0.43
2:O:175:ASP:O	2:O:179:ARG:HD2	2.19	0.43
2:O:177:TYR:CZ	3:P:796:ILE:HG23	2.54	0.43
4:R:29:ILE:HG23	4:R:76:LEU:O	2.19	0.43
1:A:225:LYS:HZ3	1:A:267:VAL:HG12	1.84	0.43
1:A:473:PRO:N	1:A:476:ARG:HH21	2.16	0.43
1:A:1269:THR:O	1:A:1273:GLU:HB2	2.18	0.43
1:A:1672:PHE:CZ	1:A:1676:ILE:HD11	2.54	0.43
1:A:2792:THR:N	1:A:2793:PRO:HD2	2.34	0.43
1:A:3262:LEU:O	1:A:3266:SER:N	2.52	0.43
1:A:3390:GLN:HA	1:A:3393:GLU:OE1	2.19	0.43
1:F:931:CYS:O	1:F:984:TYR:OH	2.37	0.43
1:F:1115:HIS:HB3	1:F:1180:GLN:HE21	1.84	0.43
1:F:1372:LEU:HD12	1:F:1373:VAL:N	2.34	0.43
1:F:1913:LYS:O	1:F:1917:LYS:HG2	2.19	0.43
1:F:2097:LEU:HD23	1:F:2100:LEU:HD12	2.01	0.43
1:F:2920:VAL:CA	1:F:2923:TRP:HB2	2.48	0.43
1:F:2999:LEU:HD22	1:F:3014:CYS:HA	2.01	0.43
1:F:3118:ASP:C	1:F:3125:ARG:HH21	2.22	0.43
1:F:3330:LEU:HD23	1:F:3384:HIS:CD2	2.54	0.43
1:F:3760:GLN:O	1:F:3764:VAL:HG23	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:187:LYS:HB3	2:L:187:LYS:HG2	2.01	0.43
3:M:748:PRO:HA	3:M:751:LYS:HD2	2.01	0.43
2:N:50:SER:HA	4:Q:115:LEU:HD22	2.01	0.43
2:N:163:GLU:HA	2:N:166:VAL:HG22	2.00	0.43
2:O:107:ARG:NE	2:O:109:GLY:O	2.52	0.43
2:O:193:SER:O	2:O:197:LYS:HG2	2.18	0.43
4:R:109:ARG:HA	4:R:119:TRP:CD1	2.54	0.43
8:D:13:DC:H4'	8:D:14:DA:C4	2.54	0.43
8:D:19:DA:H2'	8:D:20:DT:H72	2.00	0.43
1:A:337:LYS:HA	1:A:341:PHE:CD2	2.54	0.42
1:A:385:TYR:O	1:A:389:ILE:HG12	2.18	0.42
1:A:960:GLN:O	1:A:964:ARG:HG2	2.19	0.42
1:A:1576:ASP:HB3	1:A:1621:THR:HG21	2.01	0.42
1:A:1675:TYR:O	1:A:1679:LEU:HG	2.19	0.42
1:A:2158:ARG:NH2	1:A:2196:TRP:HB3	2.34	0.42
1:A:2167:PRO:HA	1:A:2170:GLN:HE21	1.82	0.42
1:A:2303:LEU:CB	1:A:2323:LEU:HD21	2.49	0.42
1:A:2481:HIS:ND1	1:A:2499:PHE:HE1	2.17	0.42
1:A:2540:LEU:O	1:A:2835:LYS:NZ	2.52	0.42
1:A:3022:GLU:HG3	1:A:3037:GLN:HG3	2.01	0.42
1:A:3638:LYS:HZ3	1:A:3642:LYS:HB3	1.84	0.42
1:F:718:MET:HA	1:F:721:TYR:CD2	2.53	0.42
1:F:894:PHE:O	1:F:905:ILE:N	2.42	0.42
1:F:1569:THR:O	1:F:1573:LYS:HG3	2.19	0.42
1:F:1591:LYS:HG3	1:F:1592:MET:N	2.34	0.42
1:F:1781:SER:O	1:F:1785:ILE:HG12	2.19	0.42
1:F:2185:MET:O	1:F:2189:ILE:HG12	2.19	0.42
1:F:3550:LYS:O	1:F:3554:PHE:HB2	2.19	0.42
1:F:3864:ARG:O	1:F:3868:VAL:HG23	2.18	0.42
1:F:4114:PRO:HA	1:F:4117:LEU:HD12	2.01	0.42
2:L:28:LEU:CD2	2:L:70:LEU:HB3	2.49	0.42
2:N:150:ARG:NH1	2:N:154:ASP:OD2	2.51	0.42
2:N:194:LEU:HB2	2:O:194:LEU:HD13	2.01	0.42
3:P:743:MET:HG2	3:P:754:PHE:HE2	1.84	0.42
3:P:816:HIS:H	3:P:850:ALA:HA	1.84	0.42
4:Q:112:LEU:HD22	4:Q:117:PHE:HE2	1.84	0.42
4:R:84:LEU:HD13	4:R:95:PHE:HB2	2.01	0.42
1:A:894:PHE:N	1:A:905:ILE:O	2.52	0.42
1:A:901:MET:HB2	1:A:2819:GLU:HG2	2.00	0.42
1:A:1310:GLU:HG3	1:A:1312:CYS:H	1.83	0.42
1:A:3048:LYS:HB2	1:A:3061:LEU:HD22	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3897:PHE:CD2	1:A:3898:LEU:HD23	2.53	0.42
1:F:540:MET:O	1:F:544:ILE:HG12	2.19	0.42
1:F:1115:HIS:CE1	1:F:1182:GLU:HB3	2.54	0.42
1:F:1124:ILE:HG13	1:F:1125:GLN:OE1	2.19	0.42
1:F:2447:LYS:HB2	1:F:2450:GLU:OE1	2.19	0.42
1:F:2891:ARG:O	1:F:2895:GLU:HG2	2.19	0.42
1:F:3037:GLN:HA	1:F:3040:TYR:CD2	2.54	0.42
1:F:3148:GLN:OE1	1:F:3148:GLN:N	2.52	0.42
1:F:3253:SER:HA	1:F:3256:MET:HE1	2.02	0.42
1:F:3558:ILE:O	1:F:3562:LEU:HG	2.20	0.42
2:O:11:VAL:HB	2:O:89:SER:HA	2.00	0.42
2:O:183:VAL:O	2:O:187:LYS:HG2	2.19	0.42
3:P:752:GLU:HG3	3:P:756:ARG:HH21	1.84	0.42
3:P:814:ARG:HB2	3:P:847:PHE:C	2.40	0.42
4:Q:28:PHE:O	4:Q:35:ALA:HB3	2.19	0.42
4:R:166:ASP:OD1	4:R:167:TYR:N	2.53	0.42
4:R:210:PHE:O	4:R:214:LEU:HB2	2.19	0.42
11:J:24:DT:H6	11:J:24:DT:H2'	1.58	0.42
1:A:40:GLN:OE1	1:A:2427:ARG:HB2	2.19	0.42
1:A:71:LYS:HA	1:A:71:LYS:HD3	1.85	0.42
1:A:520:LYS:HD3	1:A:520:LYS:HA	1.67	0.42
1:A:525:LYS:O	1:A:528:VAL:HG22	2.19	0.42
1:A:902:LYS:HG2	1:F:2570:PRO:HB2	2.01	0.42
1:A:1689:LYS:HD3	1:A:1721:HIS:NE2	2.34	0.42
1:A:2208:ASP:OD1	1:A:2209:GLU:N	2.52	0.42
1:A:2214:ARG:HG2	1:A:2218:PHE:CE2	2.54	0.42
1:A:2731:ARG:HD3	1:A:2731:ARG:HA	1.74	0.42
1:A:2773:ARG:HD2	1:A:2789:SER:O	2.19	0.42
1:A:2792:THR:O	1:A:2795:GLN:HG2	2.19	0.42
1:A:2821:ASP:N	1:A:2821:ASP:OD1	2.50	0.42
1:A:3260:LYS:O	1:A:3264:LYS:NZ	2.48	0.42
1:F:794:PRO:HA	1:F:870:LEU:HD12	2.01	0.42
1:F:1013:ILE:O	1:F:1017:ILE:HB	2.20	0.42
1:F:1155:ARG:HA	1:F:3693:GLU:CD	2.38	0.42
1:F:1261:LEU:HD11	1:F:1337:VAL:HG22	2.02	0.42
1:F:1357:LYS:HD3	1:F:1410:PRO:HD2	2.00	0.42
1:F:1380:ALA:HA	1:F:1384:PHE:HA	2.01	0.42
1:F:2140:LEU:HA	1:F:2143:ARG:HB3	2.00	0.42
1:F:2228:ARG:NH1	10:I:44:DG:H21	2.17	0.42
1:F:2276:LEU:O	1:F:2280:VAL:HG23	2.19	0.42
1:F:2433:LYS:HB2	1:F:2433:LYS:HE2	1.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2927:ALA:O	1:F:2931:ARG:N	2.37	0.42
1:F:3258:LEU:HA	1:F:3261:GLU:HG2	2.01	0.42
1:F:3423:GLN:NE2	1:F:3426:LYS:HE3	2.34	0.42
1:F:3444:ALA:HB2	1:F:3478:GLU:HB2	2.01	0.42
1:F:3459:ASN:HA	1:F:3462:ARG:HE	1.84	0.42
1:F:3575:LEU:HB2	1:F:3800:LEU:HD21	2.01	0.42
1:F:3962:ARG:HA	1:F:4124:TRP:CZ2	2.50	0.42
2:L:179:ARG:HA	3:M:781:ILE:HG21	2.00	0.42
2:O:102:LYS:HA	2:O:102:LYS:HD3	1.65	0.42
4:Q:112:LEU:HD22	4:Q:117:PHE:CE2	2.54	0.42
4:R:51:THR:O	4:R:55:SER:OG	2.27	0.42
4:R:81:ARG:CD	4:R:85:LYS:HG3	2.49	0.42
4:R:96:SER:OG	4:R:107:ARG:HD2	2.20	0.42
8:D:16:DA:N1	9:E:41:DT:C4	2.87	0.42
8:D:27:DT:C4	9:E:30:DA:N6	2.88	0.42
11:J:29:DG:O6	11:J:30:DT:N3	2.46	0.42
1:A:955:ALA:O	1:A:959:TYR:HB2	2.19	0.42
1:A:1371:VAL:HA	1:A:1374:GLN:CD	2.38	0.42
1:A:2102:LYS:O	1:A:2106:ARG:HG2	2.19	0.42
1:A:2534:ASN:ND2	1:A:2537:ASP:H	2.17	0.42
1:A:2586:PHE:CD1	1:A:2782:ASP:HB3	2.54	0.42
1:A:3182:ILE:O	1:A:3186:ARG:HG2	2.19	0.42
1:A:3186:ARG:O	1:A:3190:LEU:HG	2.20	0.42
1:A:3509:ASP:OD1	1:A:3509:ASP:N	2.50	0.42
1:A:3589:SER:O	1:A:3592:VAL:HG12	2.18	0.42
1:A:3630:ARG:HD2	1:A:3633:ILE:HD11	2.01	0.42
1:A:3895:GLU:H	1:A:3895:GLU:CD	2.20	0.42
1:A:3977:THR:HA	1:A:3981:TYR:HB2	2.01	0.42
1:F:58:VAL:HG11	1:F:3098:ARG:HD2	2.00	0.42
1:F:117:LYS:O	1:F:119:ARG:N	2.53	0.42
1:F:649:PHE:O	1:F:653:LEU:HD23	2.20	0.42
1:F:1234:GLY:HA2	1:F:1237:ALA:HB3	2.01	0.42
1:F:1271:ILE:O	1:F:1274:ARG:HD2	2.20	0.42
1:F:1306:ILE:HG13	1:F:1307:ILE:N	2.35	0.42
1:F:1373:VAL:HA	1:F:1376:LEU:HB3	2.02	0.42
1:F:1663:THR:O	1:F:1665:HIS:ND1	2.37	0.42
1:F:2225:HIS:HE1	1:F:2234:ASN:HD21	1.67	0.42
1:F:2503:LYS:O	1:F:2507:ILE:HG13	2.19	0.42
1:F:2940:ARG:HH22	1:F:3982:SER:HB3	1.84	0.42
1:F:3001:CYS:HA	1:F:3004:HIS:ND1	2.35	0.42
1:F:3164:TRP:O	1:F:3167:ARG:N	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3547:THR:O	1:F:3550:LYS:HB2	2.20	0.42
1:F:3555:VAL:O	1:F:3558:ILE:HB	2.19	0.42
1:F:3701:ILE:HD12	1:F:3717:VAL:HG13	2.01	0.42
1:F:3758:LEU:O	1:F:3762:GLN:N	2.39	0.42
1:F:3778:ASP:HB3	1:F:3781:CYS:SG	2.59	0.42
1:F:4003:ASP:HA	1:F:4007:LYS:HB2	2.02	0.42
1:F:4086:ASP:O	1:F:4089:ILE:HG12	2.19	0.42
2:K:137:ASN:HB3	2:L:141:ASN:HD21	1.84	0.42
2:L:44:THR:HB	2:L:116:VAL:HG11	2.01	0.42
2:N:32:PHE:CE1	2:N:74:LEU:HD21	2.54	0.42
3:P:813:PHE:C	3:P:849:GLY:H	2.22	0.42
4:Q:8:LEU:HD21	4:Q:37:LEU:HB2	1.99	0.42
8:D:16:DA:H2''	8:D:17:DT:C5	2.54	0.42
1:A:340:TYR:HB3	1:A:344:GLN:OE1	2.19	0.42
1:A:669:LEU:HA	1:A:672:ILE:HG22	2.01	0.42
1:A:749:VAL:O	1:A:753:GLN:HG2	2.19	0.42
1:A:787:PRO:HG2	1:A:788:TYR:CD1	2.54	0.42
1:A:1102:GLU:O	1:A:1106:ILE:HG12	2.20	0.42
1:A:1331:ASN:ND2	1:A:1384:PHE:N	2.67	0.42
1:A:1343:GLU:OE2	1:A:1398:VAL:HG21	2.19	0.42
1:A:1399:CYS:O	1:A:1403:MET:HG2	2.20	0.42
1:A:1468:LEU:HD12	1:A:1469:PRO:HD2	2.02	0.42
1:A:1627:LYS:NZ	1:A:1670:GLU:HB2	2.35	0.42
1:A:1756:PRO:O	1:A:1759:LEU:HB3	2.20	0.42
1:A:2219:LEU:HD12	1:A:2220:MET:N	2.35	0.42
1:A:3387:GLU:HA	1:A:3390:GLN:NE2	2.35	0.42
1:F:41:GLU:HA	1:F:44:LEU:HD12	2.01	0.42
1:F:410:MET:O	1:F:413:PHE:HB2	2.20	0.42
1:F:738:HIS:O	1:F:742:GLU:HG3	2.19	0.42
1:F:1769:GLU:N	1:F:1822:ARG:HH12	2.17	0.42
1:F:2349:LEU:HB3	1:F:2360:PHE:CE2	2.55	0.42
1:F:2475:ASN:HA	1:F:2478:MET:CE	2.49	0.42
1:F:2534:ASN:HD21	1:F:2536:LEU:HB3	1.84	0.42
1:F:3022:GLU:HG2	1:F:3037:GLN:CD	2.40	0.42
1:F:3162:ASN:HA	1:F:3166:ASN:OD1	2.19	0.42
1:F:3493:TRP:HD1	1:F:3521:ILE:HG23	1.84	0.42
1:F:3810:VAL:HG13	1:F:3930:VAL:HG13	2.02	0.42
3:M:822:SER:HB3	3:M:838:LEU:HD22	2.01	0.42
2:N:88:PHE:CE2	2:N:90:LYS:HG2	2.55	0.42
4:Q:152:GLU:HB2	4:R:189:PHE:HZ	1.84	0.42
4:R:96:SER:O	4:R:107:ARG:NH1	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:52:ALA:O	1:A:55:THR:OG1	2.31	0.42
1:A:149:ILE:HG13	1:A:150:GLY:N	2.33	0.42
1:A:195:ASN:HA	1:A:198:ARG:NE	2.34	0.42
1:A:993:HIS:ND1	1:A:2779:ASP:OD1	2.52	0.42
1:A:996:THR:HG21	1:A:1039:TRP:CD1	2.54	0.42
1:A:3313:SER:HB3	1:A:3316:LEU:HA	2.00	0.42
1:A:3826:ALA:O	1:A:3830:SER:OG	2.28	0.42
1:F:203:GLU:O	1:F:207:GLN:HG2	2.20	0.42
1:F:371:GLY:O	1:F:375:VAL:HG23	2.20	0.42
1:F:409:GLN:H	1:F:409:GLN:CD	2.21	0.42
1:F:614:PRO:HG2	1:F:617:PRO:HG3	2.01	0.42
1:F:737:PRO:O	1:F:740:ILE:HG22	2.20	0.42
1:F:847:SER:OG	1:F:850:GLU:HG2	2.19	0.42
1:F:1220:LEU:O	1:F:1224:PHE:HB2	2.19	0.42
1:F:1422:LYS:HD3	1:F:1422:LYS:HA	1.81	0.42
1:F:1589:ASN:OD1	1:F:1592:MET:HG3	2.20	0.42
1:F:1667:SER:O	1:F:1667:SER:OG	2.38	0.42
1:F:1783:ARG:HH21	1:F:1830:HIS:CD2	2.37	0.42
1:F:2773:ARG:HB2	1:F:2775:TYR:CZ	2.55	0.42
1:F:2859:GLN:OE1	1:F:2888:VAL:HG13	2.20	0.42
1:F:2880:CYS:O	1:F:2885:GLN:N	2.52	0.42
1:F:3108:GLN:O	1:F:3111:MET:HG3	2.19	0.42
1:F:3393:GLU:HG2	1:F:3413:TYR:OH	2.20	0.42
1:F:3494:GLN:OE1	1:F:3709:GLY:HA2	2.19	0.42
2:K:106:PHE:HE1	4:R:110:SER:HB3	1.83	0.42
3:M:888:ILE:HD13	3:M:910:LEU:HG	2.01	0.42
2:N:30:SER:HA	2:N:49:GLU:HG2	2.01	0.42
3:P:759:ASP:CG	3:P:763:ASP:HB3	2.39	0.42
3:P:818:VAL:O	3:P:853:VAL:HB	2.19	0.42
8:D:15:DA:C8	8:D:16:DA:N6	2.88	0.42
11:J:25:DT:H3'	11:J:26:DT:C5	2.55	0.42
1:A:58:VAL:HG21	1:A:3098:ARG:HH11	1.85	0.42
1:A:386:VAL:O	1:A:390:GLN:HG2	2.20	0.42
1:A:573:LEU:O	1:A:577:GLU:HG2	2.20	0.42
1:A:580:ASP:HB3	1:A:619:ASP:OD2	2.20	0.42
1:A:712:LYS:HD3	1:A:712:LYS:HA	1.74	0.42
1:A:1015:ASP:OD1	1:A:1015:ASP:N	2.49	0.42
1:A:1297:PHE:HA	1:A:1301:ILE:CG1	2.50	0.42
1:A:1307:ILE:HD11	1:A:1311:LYS:H	1.84	0.42
1:A:1423:ILE:HD11	1:A:1427:SER:H	1.85	0.42
1:A:1443:VAL:HG22	1:A:1447:ARG:HD3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1869:LYS:HB3	1:A:1873:TYR:CZ	2.55	0.42
1:A:2579:HIS:CD2	1:F:947:GLN:HB2	2.54	0.42
1:A:3348:LEU:HD12	1:A:3349:ALA:N	2.35	0.42
1:A:3392:ALA:HB1	1:A:3409:VAL:HG22	2.01	0.42
1:A:3422:GLN:O	1:A:3426:LYS:HG2	2.20	0.42
1:F:133:LYS:O	1:F:137:THR:HG23	2.20	0.42
1:F:240:GLU:O	1:F:243:GLN:HB2	2.20	0.42
1:F:2428:ASP:O	1:F:2432:GLN:HG2	2.20	0.42
1:F:3553:GLU:HG3	1:F:3557:ARG:NH2	2.34	0.42
2:L:12:SER:OG	2:L:88:PHE:N	2.52	0.42
3:M:668:SER:HB3	3:M:702:ALA:HA	2.01	0.42
3:M:749:SER:HA	3:M:752:GLU:OE1	2.19	0.42
2:N:187:LYS:HB3	2:O:187:LYS:HB3	2.01	0.42
4:R:65:LEU:HA	4:R:117:PHE:CE2	2.55	0.42
4:R:218:TYR:HA	4:R:221:VAL:HB	2.01	0.42
1:A:11:SER:HA	1:A:14:ARG:NE	2.35	0.42
1:A:187:SER:HA	1:A:190:ILE:HB	2.02	0.42
1:A:738:HIS:HB2	1:A:780:ILE:HD11	2.01	0.42
1:A:924:ARG:NH2	1:A:2768:GLN:HA	2.35	0.42
1:A:990:GLN:NE2	1:A:2778:GLY:O	2.53	0.42
1:A:1352:SER:HB3	1:A:1356:TRP:HB2	2.00	0.42
1:A:1575:LEU:HD21	1:A:1617:LYS:CB	2.50	0.42
1:A:1664:SER:HA	1:A:1668:PHE:CD2	2.55	0.42
1:A:2140:LEU:HD23	1:A:2143:ARG:HD2	2.01	0.42
1:A:2595:TRP:CH2	1:A:2767:ALA:HA	2.55	0.42
1:A:2820:MET:HA	1:A:2823:PHE:CZ	2.54	0.42
1:A:2826:LEU:HD13	1:A:2829:LYS:HD2	2.00	0.42
1:A:3075:LYS:HE2	1:A:3075:LYS:HB3	1.72	0.42
1:A:3231:ILE:O	1:A:3235:LYS:HD3	2.20	0.42
1:A:3607:GLU:O	1:A:3611:GLU:HG2	2.20	0.42
1:A:3690:PHE:CE2	1:A:3696:ARG:HB3	2.54	0.42
1:A:3981:TYR:O	1:A:3985:VAL:HG23	2.20	0.42
1:F:900:GLU:OE1	1:F:900:GLU:N	2.53	0.42
1:F:1087:ARG:HA	1:F:1090:ARG:NE	2.35	0.42
1:F:1209:LYS:HA	1:F:1209:LYS:HD3	1.90	0.42
1:F:1783:ARG:HH21	1:F:1830:HIS:CG	2.37	0.42
1:F:1879:VAL:O	1:F:1882:SER:OG	2.32	0.42
1:F:2120:ARG:NH1	1:F:2160:TYR:HB2	2.34	0.42
1:F:2155:GLU:O	1:F:2158:ARG:HG2	2.20	0.42
1:F:2430:GLU:HA	1:F:2433:LYS:HE2	2.01	0.42
1:F:2749:ALA:HB1	1:F:2753:ARG:NH1	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3178:ILE:H	1:F:3178:ILE:HD12	1.84	0.42
1:F:3302:LYS:O	1:F:3303:THR:OG1	2.36	0.42
1:F:3460:GLU:O	1:F:3464:LYS:HD3	2.19	0.42
1:F:3552:LYS:HA	1:F:3555:VAL:HG22	2.01	0.42
2:K:45:GLY:HA2	2:K:114:GLU:H	1.85	0.42
2:K:95:PHE:H	2:K:113:LEU:HG	1.85	0.42
2:O:117:GLU:H	2:O:117:GLU:CD	2.23	0.42
3:P:723:PRO:O	3:P:727:LEU:HG	2.20	0.42
3:P:890:LYS:HG2	3:P:904:GLN:O	2.20	0.42
4:Q:24:LEU:HB2	4:Q:211:VAL:HG12	2.00	0.42
4:R:20:GLU:H	4:R:97:CYS:HB3	1.85	0.42
4:R:95:PHE:HE1	4:R:108:VAL:HG13	1.85	0.42
1:A:79:ARG:NE	1:A:82:ARG:HE	2.14	0.42
1:A:207:GLN:NE2	1:A:216:LYS:C	2.73	0.42
1:A:616:LYS:O	1:A:620:PHE:HD1	2.03	0.42
1:A:1028:PHE:O	1:A:1031:ARG:HG2	2.20	0.42
1:A:1474:ASP:OD1	1:A:1474:ASP:N	2.53	0.42
1:A:2321:GLU:HB2	1:A:2366:LYS:NZ	2.34	0.42
1:A:2340:SER:O	1:A:2344:LEU:HG	2.20	0.42
1:A:2405:VAL:O	1:A:2408:MET:HG2	2.20	0.42
1:A:3324:ARG:HA	1:A:3327:ASN:OD1	2.20	0.42
1:A:3457:ASN:HB3	1:A:3494:GLN:HE22	1.84	0.42
1:F:165:LYS:HA	1:F:165:LYS:HD3	1.76	0.42
1:F:623:PHE:O	1:F:626:LEU:HG	2.19	0.42
1:F:987:LEU:HA	1:F:990:GLN:HE21	1.85	0.42
1:F:1440:ASP:OD1	1:F:1441:ALA:N	2.48	0.42
1:F:1484:LEU:HA	1:F:1487:VAL:HG12	2.01	0.42
1:F:1538:LEU:O	1:F:1552:HIS:ND1	2.44	0.42
1:F:1690:GLY:O	1:F:1694:THR:HG23	2.19	0.42
1:F:2386:LEU:HD23	1:F:2418:LYS:HB3	2.02	0.42
1:F:3237:SER:O	1:F:3241:LYS:HG2	2.19	0.42
1:F:3684:SER:HB3	1:F:3687:MET:HB2	2.01	0.42
1:F:3751:LEU:HB3	1:F:3803:ILE:HG12	2.02	0.42
2:L:154:ASP:O	2:L:158:VAL:HG12	2.20	0.42
2:N:55:GLU:HB2	2:N:61:MET:CE	2.49	0.42
3:P:812:MET:H	3:P:848:HIS:HB2	1.85	0.42
3:P:879:ARG:HB2	3:P:886:PHE:HE1	1.84	0.42
4:Q:18:LEU:HD11	4:Q:21:ASN:HB3	2.02	0.42
8:D:19:DA:N6	9:E:37:DT:H73	2.34	0.42
11:J:31:DT:C4	11:J:32:DT:C4	3.08	0.42
1:A:128:LEU:H	1:A:128:LEU:HD12	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:925:GLN:HA	1:A:2769:VAL:HG13	2.02	0.42
1:A:1064:TYR:HA	1:A:1106:ILE:HG21	2.02	0.42
1:A:1527:ARG:O	1:A:1530:SER:OG	2.30	0.42
1:A:1758:LEU:HA	1:A:1761:LEU:HD12	2.02	0.42
1:A:2952:ILE:HD13	1:A:2975:ALA:HB2	2.02	0.42
1:A:3108:GLN:O	1:A:3111:MET:HG3	2.19	0.42
1:A:3314:SER:OG	1:A:3318:LYS:HB2	2.19	0.42
1:A:3480:LEU:HA	1:A:3483:MET:HG2	2.01	0.42
1:A:3786:LEU:HD11	1:A:3906:SER:HB2	2.01	0.42
1:F:111:CYS:HB2	1:F:134:LEU:HD21	2.02	0.42
1:F:296:VAL:HG22	1:F:300:TRP:NE1	2.35	0.42
1:F:451:PRO:O	1:F:455:LEU:HG	2.20	0.42
1:F:1255:CYS:HA	1:F:1258:ASP:OD2	2.20	0.42
1:F:1395:LEU:O	1:F:1398:VAL:HG12	2.19	0.42
1:F:1471:GLN:H	1:F:1476:HIS:HD2	1.68	0.42
1:F:1762:MET:HB3	1:F:1778:PHE:HE2	1.85	0.42
1:F:1800:SER:O	1:F:1803:GLU:HG2	2.20	0.42
1:F:2420:PHE:HE2	1:F:2439:ILE:HD11	1.85	0.42
1:F:2757:ILE:HD13	1:F:2757:ILE:HA	1.94	0.42
1:F:2782:ASP:N	1:F:2782:ASP:OD1	2.53	0.42
1:F:3169:PRO:HB2	1:F:3179:TRP:CE2	2.55	0.42
2:L:23:SER:OG	2:L:33:VAL:HB	2.20	0.42
2:L:153:ARG:NH2	2:L:156:ASN:HB3	2.35	0.42
3:M:800:GLU:HB3	3:M:806:ASP:N	2.35	0.42
3:M:893:TRP:O	3:M:896:ASP:HB2	2.20	0.42
2:N:66:TYR:CZ	2:N:70:LEU:HD21	2.55	0.42
2:N:181:ILE:HD11	3:P:771:LEU:HA	2.02	0.42
4:Q:57:ARG:HH22	4:Q:76:LEU:HD12	1.85	0.42
4:Q:134:HIS:N	4:R:40:ASP:O	2.52	0.42
1:A:559:SER:O	1:A:562:HIS:HB3	2.19	0.41
1:A:774:GLU:O	1:A:778:ILE:HG12	2.19	0.41
1:A:1419:LEU:CD1	1:A:1467:ILE:HD13	2.50	0.41
1:A:1591:LYS:HG3	1:A:1592:MET:N	2.34	0.41
1:A:1731:PRO:HA	1:A:1736:PHE:CE2	2.55	0.41
1:A:2121:ASP:HB2	1:A:2127:LYS:HD3	2.01	0.41
1:A:2227:LYS:NZ	1:A:2736:GLN:OE1	2.31	0.41
1:A:2382:VAL:HA	1:A:2385:LEU:HG	2.02	0.41
1:A:2965:TYR:HB3	1:A:3001:CYS:CB	2.43	0.41
1:A:2973:ASP:O	1:A:2976:LEU:HG	2.20	0.41
1:A:3459:ASN:O	1:A:3462:ARG:HB2	2.19	0.41
1:A:3725:ARG:HB3	1:A:3739:ILE:HD12	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3901:ARG:HD2	1:A:3971:MET:HE3	2.02	0.41
1:F:942:LEU:HD12	1:F:2783:ILE:HD11	2.02	0.41
1:F:1334:LYS:O	1:F:1338:VAL:HG23	2.18	0.41
1:F:1875:LYS:HE2	1:F:1875:LYS:HB3	1.68	0.41
1:F:1960:LYS:HD3	1:F:1961:PHE:H	1.85	0.41
1:F:2806:LYS:HB2	1:F:2857:CYS:HB2	2.02	0.41
1:F:3239:LYS:O	1:F:3242:MET:HB2	2.20	0.41
1:F:3459:ASN:O	1:F:3463:LEU:HG	2.20	0.41
1:F:3704:GLN:NE2	1:F:3717:VAL:O	2.38	0.41
2:K:104:VAL:HG11	4:R:75:HIS:NE2	2.35	0.41
2:L:61:MET:SD	2:L:66:TYR:HE1	2.43	0.41
3:M:838:LEU:CD2	3:M:867:GLU:H	2.33	0.41
2:N:84:TYR:HD1	2:N:97:PHE:HB2	1.85	0.41
2:N:176:LEU:HB3	2:N:180:PHE:CZ	2.55	0.41
3:P:769:THR:HA	3:P:773:GLN:OE1	2.19	0.41
8:D:22:DG:C8	8:D:23:DT:H71	2.55	0.41
1:A:53:LEU:O	1:A:57:LEU:HG	2.19	0.41
1:A:212:VAL:HG23	1:A:214:GLU:HB2	2.01	0.41
1:A:493:LYS:HA	1:A:494:PRO:HD3	1.91	0.41
1:A:1418:HIS:O	1:A:1422:LYS:NZ	2.34	0.41
1:A:1727:ARG:HA	1:A:1727:ARG:CZ	2.49	0.41
1:A:2195:SER:O	1:A:2722:ARG:HG3	2.20	0.41
1:A:2310:VAL:HG13	1:A:2316:TYR:CE2	2.54	0.41
1:A:3240:MET:SD	1:A:3241:LYS:HG3	2.60	0.41
1:A:3738:ILE:HG12	1:A:3750:PHE:O	2.20	0.41
1:A:3755:GLY:HA2	1:A:3799:ARG:C	2.39	0.41
1:A:3914:SER:O	1:A:3918:LEU:HG	2.20	0.41
1:A:4055:ASN:ND2	1:A:4058:VAL:HG23	2.34	0.41
1:F:324:SER:OG	1:F:368:LEU:O	2.37	0.41
1:F:900:GLU:HB2	1:F:901:MET:CE	2.51	0.41
1:F:1212:LEU:HD12	1:F:1215:GLU:O	2.19	0.41
1:F:1816:ARG:HA	1:F:1819:PHE:CE2	2.55	0.41
1:F:2165:LEU:HD21	1:F:2202:PRO:HA	2.02	0.41
1:F:2181:GLY:HA3	1:F:2184:TYR:HD2	1.86	0.41
1:F:3111:MET:SD	1:F:3112:GLN:N	2.93	0.41
1:F:3465:PHE:CE1	1:F:3469:LEU:HD21	2.56	0.41
1:F:3506:LEU:HD21	1:F:3555:VAL:HG12	2.01	0.41
3:M:823:TYR:C	3:M:871:ARG:HH22	2.21	0.41
3:M:879:ARG:HH11	3:M:888:ILE:HD11	1.84	0.41
2:O:2:GLU:OE1	2:O:27:THR:N	2.53	0.41
2:O:166:VAL:HG12	2:O:170:GLU:OE2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:Q:35:ALA:HB1	4:Q:48:GLN:NE2	2.35	0.41
4:Q:43:GLN:HG2	4:Q:126:ALA:HA	2.02	0.41
10:I:43:DT:H2'	10:I:44:DG:N2	2.35	0.41
1:A:1015:ASP:O	1:A:1019:ASP:HB2	2.21	0.41
1:A:1677:SER:O	1:A:1681:ASP:N	2.53	0.41
1:A:2352:HIS:CD2	1:A:2353:GLN:HG3	2.55	0.41
1:A:2773:ARG:NH1	1:A:2775:TYR:OH	2.53	0.41
1:A:3699:LEU:O	1:A:3718:ARG:HB3	2.20	0.41
1:A:3778:ASP:HB3	1:A:3781:CYS:HB3	2.02	0.41
1:F:965:THR:HG23	1:F:966:PHE:CD1	2.56	0.41
1:F:2225:HIS:ND1	1:F:2230:VAL:HG23	2.35	0.41
1:F:2225:HIS:HB3	1:F:2227:LYS:H	1.85	0.41
1:F:2260:PHE:CD2	1:F:2277:LEU:HD11	2.55	0.41
1:F:3162:ASN:OD1	1:F:3163:THR:N	2.53	0.41
1:F:3347:CYS:O	1:F:3351:ILE:HG13	2.20	0.41
1:F:3629:ARG:O	1:F:3633:ILE:HG23	2.20	0.41
1:F:3768:PHE:O	1:F:3771:MET:HG2	2.19	0.41
1:F:3970:LEU:HD23	1:F:3971:MET:H	1.84	0.41
1:F:4094:PRO:HB2	1:F:4098:LEU:HD13	2.01	0.41
2:K:127:ILE:HD11	2:L:126:LEU:HD13	2.02	0.41
2:K:189:THR:HA	2:K:192:ARG:HE	1.84	0.41
2:L:86:PHE:HB3	2:L:95:PHE:HE1	1.84	0.41
3:P:757:GLU:HG3	3:P:758:TYR:CD2	2.55	0.41
8:D:29:DG:H2'	8:D:30:DT:H71	2.01	0.41
1:A:131:LEU:O	1:A:135:LEU:HD23	2.20	0.41
1:A:576:VAL:HA	1:A:579:LEU:HG	2.03	0.41
1:A:774:GLU:HG3	1:A:858:MET:HE2	2.03	0.41
1:A:889:GLU:HB2	1:A:891:ARG:HE	1.85	0.41
1:A:982:GLN:CD	1:A:2591:ILE:HG23	2.40	0.41
1:A:1334:LYS:O	1:A:1338:VAL:HG23	2.21	0.41
1:A:1339:VAL:HA	1:A:1342:MET:HG3	2.01	0.41
1:A:1633:TRP:CE3	1:A:1674:THR:HG23	2.55	0.41
1:A:1783:ARG:O	1:A:1787:ARG:NE	2.48	0.41
1:A:2835:LYS:HD3	1:A:2839:ASP:OD2	2.20	0.41
1:A:2852:PRO:HG2	1:A:3116:SER:OG	2.21	0.41
1:A:2940:ARG:HD2	1:A:3977:THR:O	2.21	0.41
1:A:2998:SER:HA	1:A:3001:CYS:SG	2.61	0.41
1:A:3360:LEU:CD2	1:A:3373:VAL:HG11	2.50	0.41
1:F:238:MET:HA	1:F:243:GLN:HG3	2.02	0.41
1:F:621:SER:O	1:F:624:ILE:HG12	2.20	0.41
1:F:977:ASP:HB3	1:F:980:THR:OG1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1048:GLN:HA	1:F:1051:LYS:HZ2	1.85	0.41
1:F:1055:ASN:ND2	1:F:1057:LYS:HG3	2.35	0.41
1:F:1104:LEU:HD11	1:F:1138:ILE:HD11	2.02	0.41
1:F:2349:LEU:O	1:F:2353:GLN:HB2	2.20	0.41
1:F:2738:LYS:HZ1	10:I:44:DG:N2	2.17	0.41
1:F:3033:GLU:HB2	1:F:3034:PRO:HD3	2.02	0.41
1:F:3104:GLN:HA	1:F:3107:ILE:HD12	2.01	0.41
1:F:3144:PHE:HD2	1:F:3150:ASN:ND2	2.18	0.41
1:F:3235:LYS:HB2	1:F:3235:LYS:HE2	1.79	0.41
1:F:3571:PHE:O	1:F:3575:LEU:HG	2.20	0.41
3:M:818:VAL:HG13	3:M:864:ILE:HG12	2.03	0.41
2:N:108:LEU:HG	2:N:109:GLY:H	1.84	0.41
2:N:133:THR:HA	2:N:136:GLU:HG3	2.03	0.41
2:O:124:ARG:HE	2:O:127:ILE:HD12	1.85	0.41
4:Q:157:LEU:CD2	4:R:157:LEU:HA	2.50	0.41
9:E:23:DT:H2"	9:E:25:DA:C2	2.55	0.41
1:A:416:SER:O	1:A:419:SER:OG	2.30	0.41
1:A:447:PRO:HD3	1:A:527:TYR:CE2	2.55	0.41
1:A:760:LEU:HD21	1:A:798:GLY:HA3	2.02	0.41
1:A:921:ALA:HB3	1:A:927:LYS:HD2	2.03	0.41
1:A:993:HIS:CD2	1:A:1039:TRP:CD2	3.09	0.41
1:A:997:ASN:O	1:A:1001:PHE:HB2	2.20	0.41
1:A:1100:VAL:HG23	1:A:1101:PHE:N	2.35	0.41
1:A:1626:TRP:CZ2	1:A:1674:THR:HG21	2.56	0.41
1:A:1771:GLN:HE22	1:A:1774:MET:H	1.67	0.41
1:A:2473:MET:HA	1:A:2476:ILE:HD12	2.01	0.41
1:A:2973:ASP:OD1	1:A:2977:ASN:ND2	2.54	0.41
1:A:3330:LEU:HG	1:A:3384:HIS:CE1	2.56	0.41
1:A:3901:ARG:HH11	1:A:3971:MET:CE	2.33	0.41
1:A:4013:TRP:HB2	1:A:4038:TRP:HE1	1.86	0.41
1:A:4059:ILE:HA	1:A:4062:ASP:OD2	2.20	0.41
1:F:243:GLN:O	1:F:246:ARG:HG2	2.19	0.41
1:F:2339:GLU:O	1:F:2342:CYS:N	2.54	0.41
1:F:2584:CYS:SG	1:F:2779:ASP:HB2	2.61	0.41
1:F:3425:ARG:HA	1:F:3428:GLU:OE2	2.21	0.41
1:F:3874:ARG:O	1:F:3878:VAL:HG12	2.20	0.41
3:P:699:CYS:HA	3:P:719:ASP:HB2	2.02	0.41
1:A:175:TYR:O	1:A:227:LEU:HD12	2.20	0.41
1:A:248:ILE:HA	1:A:251:PHE:CD2	2.56	0.41
1:A:646:VAL:O	1:A:650:SER:OG	2.30	0.41
1:A:890:LYS:HG2	1:A:3889:ARG:NH2	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:992:ILE:HD13	1:A:992:ILE:HA	1.95	0.41
1:A:1016:GLY:O	1:A:1026:ARG:HG2	2.21	0.41
1:A:1407:LYS:HA	1:A:1412:LYS:HB3	2.02	0.41
1:A:2295:GLN:HE21	1:A:2298:GLU:C	2.24	0.41
1:A:3080:LEU:HD23	1:A:3080:LEU:HA	1.94	0.41
1:A:3124:SER:O	1:A:3127:THR:OG1	2.32	0.41
1:A:3128:LYS:HA	1:A:3128:LYS:HD3	1.83	0.41
1:A:3226:ASP:O	1:A:3230:LEU:HG	2.20	0.41
1:A:3571:PHE:CZ	1:A:3575:LEU:HD11	2.56	0.41
1:A:3722:PHE:HA	1:A:3741:ARG:HB3	2.02	0.41
1:A:3920:ILE:HA	1:A:3944:HIS:O	2.20	0.41
1:A:3958:LEU:CD2	1:A:4115:ASN:HD22	2.34	0.41
1:F:32:HIS:O	1:F:36:ARG:HG2	2.21	0.41
1:F:333:MET:O	1:F:337:LYS:CB	2.69	0.41
1:F:405:ASP:OD1	1:F:406:ARG:N	2.53	0.41
1:F:771:ASN:HA	1:F:774:GLU:CD	2.40	0.41
1:F:990:GLN:HB3	1:F:2781:PRO:HD3	2.02	0.41
1:F:1333:SER:O	1:F:1337:VAL:HG23	2.21	0.41
1:F:2339:GLU:HA	1:F:2342:CYS:SG	2.61	0.41
1:F:2452:ARG:NE	1:F:2497:GLU:OE1	2.50	0.41
1:F:2492:ASP:OD2	1:F:2494:ASP:HB2	2.20	0.41
1:F:3106:GLY:O	1:F:3110:PHE:HD2	2.03	0.41
1:F:3289:ARG:H	1:F:3292:GLY:HA3	1.85	0.41
2:K:1:MET:N	2:K:26:LYS:HE2	2.35	0.41
2:K:130:CYS:SG	2:K:131:LEU:N	2.93	0.41
2:L:6:SER:O	2:L:7:ARG:HD2	2.20	0.41
2:L:134:ILE:HA	2:L:137:ASN:ND2	2.36	0.41
3:M:754:PHE:O	3:M:758:TYR:N	2.44	0.41
2:N:188:LYS:HG2	3:P:765:TYR:C	2.41	0.41
2:O:178:LYS:HE3	3:P:787:GLN:NE2	2.35	0.41
4:Q:96:SER:O	4:Q:107:ARG:N	2.32	0.41
4:Q:133:GLN:HB2	4:R:42:GLN:C	2.41	0.41
1:A:220:LEU:HD12	1:A:223:CYS:SG	2.61	0.41
1:A:369:PHE:O	1:A:372:PRO:HD2	2.21	0.41
1:A:406:ARG:HA	1:A:409:GLN:HE22	1.86	0.41
1:A:848:LEU:O	1:A:851:ILE:HB	2.21	0.41
1:A:865:GLN:HB2	1:A:3168:TYR:O	2.20	0.41
1:A:886:TRP:CZ3	1:A:911:LEU:HB3	2.55	0.41
1:A:907:LEU:HD12	1:A:910:PHE:CD2	2.56	0.41
1:A:1278:ALA:O	1:A:1282:LEU:N	2.47	0.41
1:A:1375:THR:HA	1:A:1378:GLU:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2166:SER:HB3	1:A:2207:LYS:NZ	2.36	0.41
1:A:2182:ILE:O	1:A:2186:VAL:HG23	2.21	0.41
1:A:2883:SER:O	1:A:2883:SER:OG	2.35	0.41
1:A:3505:LEU:HG	1:A:3515:GLN:HE22	1.86	0.41
1:A:3603:LYS:H	1:A:3606:ILE:HB	1.86	0.41
1:F:79:ARG:NH2	1:F:82:ARG:HD2	2.35	0.41
1:F:718:MET:SD	1:F:719:LYS:HG3	2.61	0.41
1:F:959:TYR:O	1:F:963:LYS:HG3	2.21	0.41
1:F:1219:PHE:O	1:F:1223:THR:OG1	2.21	0.41
1:F:1457:GLN:N	1:F:1460:ARG:HH21	2.18	0.41
1:F:1934:LEU:HA	1:F:1937:ARG:NE	2.34	0.41
1:F:2586:PHE:HZ	1:F:2780:LEU:HB2	1.86	0.41
1:F:3837:CYS:HA	1:F:3841:ASP:HB2	2.03	0.41
1:F:4085:LYS:O	1:F:4089:ILE:HG23	2.19	0.41
2:K:133:THR:O	2:K:136:GLU:HG2	2.21	0.41
2:L:58:ASP:OD1	2:L:59:MET:N	2.54	0.41
2:N:192:ARG:NE	3:P:766:PHE:O	2.54	0.41
2:O:42:ALA:CB	2:O:122:VAL:HB	2.51	0.41
3:P:813:PHE:N	3:P:848:HIS:HB2	2.35	0.41
4:R:52:SER:O	4:R:56:GLN:HG2	2.20	0.41
4:R:84:LEU:HD11	4:R:86:ASP:HB2	2.03	0.41
1:A:14:ARG:HG3	1:A:15:LEU:HD22	2.03	0.41
1:A:373:CYS:HB2	1:A:381:VAL:HG22	2.03	0.41
1:A:886:TRP:CD2	1:A:964:ARG:HG3	2.55	0.41
1:A:1384:PHE:HB3	1:A:1386:ILE:HG22	2.03	0.41
1:A:1627:LYS:HA	1:A:1627:LYS:HD3	1.89	0.41
1:A:2307:MET:HE1	1:A:2319:ALA:HB3	2.02	0.41
1:A:2397:CYS:O	1:A:2401:VAL:HG23	2.21	0.41
1:A:2534:ASN:HD22	1:A:2537:ASP:HB2	1.85	0.41
1:A:2921:LEU:O	1:A:2924:VAL:HG12	2.21	0.41
1:A:2985:GLU:OE1	1:A:2985:GLU:N	2.52	0.41
1:A:3042:PRO:HA	1:A:3045:ILE:HG12	2.03	0.41
1:A:3238:MET:HA	1:A:3241:LYS:HD2	2.03	0.41
1:A:3557:ARG:O	1:A:3561:LYS:HG3	2.21	0.41
1:A:3806:LEU:HD11	1:A:3938:ILE:HD12	2.03	0.41
1:F:418:ALA:HB3	1:F:463:LYS:NZ	2.35	0.41
1:F:1651:LYS:HA	1:F:1651:LYS:HD2	1.94	0.41
1:F:1783:ARG:HE	1:F:1830:HIS:CB	2.34	0.41
1:F:1805:PHE:CD1	1:F:1820:VAL:HB	2.56	0.41
1:F:2104:MET:SD	1:F:2105:HIS:N	2.93	0.41
1:F:2524:PHE:O	1:F:2530:ARG:HD2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2527:HIS:HB3	1:F:2530:ARG:NH1	2.35	0.41
1:F:3378:TYR:CD1	1:F:3419:PHE:HE1	2.38	0.41
1:F:3422:GLN:NE2	1:F:3423:GLN:HG2	2.36	0.41
1:F:3449:LYS:HG2	1:F:3452:LYS:HZ3	1.86	0.41
1:F:3474:ARG:HG3	1:F:3475:TYR:CD2	2.56	0.41
1:F:3582:GLU:HG2	1:F:3671:ASN:HB3	2.03	0.41
1:F:3811:THR:OG1	1:F:3926:ASN:OD1	2.35	0.41
2:N:88:PHE:HE1	2:N:93:CYS:HA	1.86	0.41
2:N:99:LYS:HB2	2:N:108:LEU:HB2	2.02	0.41
4:Q:170:SER:O	4:R:172:ALA:HA	2.21	0.41
4:R:24:LEU:HG	4:R:210:PHE:CZ	2.56	0.41
1:A:23:ASP:HB3	1:A:34:LEU:HD11	2.02	0.41
1:A:229:SER:HB2	1:A:277:LEU:HD12	2.02	0.41
1:A:637:LYS:HA	1:A:637:LYS:HD2	1.73	0.41
1:A:638:GLN:HB2	1:A:641:PHE:HD2	1.86	0.41
1:A:713:GLU:O	1:A:717:LYS:HG2	2.21	0.41
1:A:737:PRO:HG2	1:A:740:ILE:HG22	2.03	0.41
1:A:901:MET:HA	1:F:2570:PRO:HB3	2.03	0.41
1:A:1000:LYS:HA	1:A:1004:GLN:NE2	2.35	0.41
1:A:1112:ALA:HA	1:A:1180:GLN:HG2	2.03	0.41
1:A:1155:ARG:O	1:A:3693:GLU:HG2	2.20	0.41
1:A:1330:TYR:O	1:A:1333:SER:OG	2.32	0.41
1:A:2312:TYR:CE2	8:D:17:DT:P	3.14	0.41
1:A:2387:PRO:HG3	1:A:2418:LYS:HD2	2.03	0.41
1:A:2467:THR:N	1:A:2470:ARG:HH21	2.18	0.41
1:A:2739:LEU:HA	1:A:2742:MET:HG2	2.02	0.41
1:A:2893:LEU:HB3	1:A:2926:LEU:HD21	2.03	0.41
1:A:3192:LYS:O	1:A:3195:GLU:HG2	2.20	0.41
1:A:3257:LYS:O	1:A:3261:GLU:HG3	2.21	0.41
1:A:3503:VAL:HG22	1:A:3536:SER:HB3	2.02	0.41
1:A:3580:ASN:HB2	1:A:3583:LEU:HD12	2.03	0.41
1:A:3584:LEU:H	1:A:3584:LEU:HD12	1.85	0.41
1:A:3881:ASP:O	1:A:3885:ARG:HG3	2.21	0.41
1:A:4051:LEU:HD12	1:A:4051:LEU:HA	1.86	0.41
1:A:4064:LEU:O	1:A:4068:HIS:HB3	2.21	0.41
1:F:31:GLY:HA3	1:F:77:GLU:HB2	2.03	0.41
1:F:156:PHE:HA	1:F:159:GLU:HG3	2.02	0.41
1:F:238:MET:HG2	1:F:283:SER:N	2.36	0.41
1:F:652:GLU:OE2	1:F:656:GLN:NE2	2.53	0.41
1:F:745:VAL:O	1:F:749:VAL:HG23	2.21	0.41
1:F:826:PHE:O	1:F:836:LYS:NZ	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:985:GLU:N	1:F:986:PRO:HD2	2.36	0.41
1:F:1058:SER:O	1:F:1062:ARG:HG2	2.21	0.41
1:F:1206:LEU:HA	1:F:1209:LYS:HG2	2.03	0.41
1:F:1418:HIS:O	1:F:1422:LYS:HG2	2.21	0.41
1:F:1591:LYS:HG3	1:F:1592:MET:H	1.85	0.41
1:F:1646:LEU:O	1:F:1649:LEU:HG	2.21	0.41
1:F:1710:LEU:O	1:F:1713:VAL:HG22	2.20	0.41
1:F:1712:ARG:NE	1:F:1712:ARG:O	2.54	0.41
1:F:1818:SER:HB2	1:F:1822:ARG:HE	1.86	0.41
1:F:2164:TRP:O	1:F:2168:LEU:HG	2.21	0.41
1:F:2214:ARG:HG2	1:F:2218:PHE:CZ	2.56	0.41
1:F:2284:ASP:OD1	1:F:2284:ASP:N	2.54	0.41
1:F:2420:PHE:CE2	1:F:2439:ILE:HD11	2.56	0.41
1:F:2859:GLN:O	1:F:2862:SER:OG	2.26	0.41
1:F:3384:HIS:HA	1:F:3387:GLU:OE1	2.21	0.41
1:F:3557:ARG:HG3	1:F:3561:LYS:NZ	2.36	0.41
1:F:3608:LYS:HG3	1:F:3612:ARG:CZ	2.50	0.41
1:F:3751:LEU:HD12	1:F:3751:LEU:HA	1.97	0.41
1:F:4115:ASN:OD1	1:F:4116:ILE:N	2.54	0.41
2:K:8:ILE:HG12	2:K:20:LEU:HD22	2.03	0.41
2:K:98:GLU:HA	2:K:108:LEU:HB2	2.03	0.41
2:K:150:ARG:HD3	2:K:153:ARG:HH21	1.85	0.41
2:L:13:GLU:O	2:L:16:ILE:HG22	2.21	0.41
2:L:179:ARG:O	2:L:183:VAL:HG12	2.21	0.41
3:M:723:PRO:O	3:M:727:LEU:HG	2.21	0.41
3:M:813:PHE:HB3	3:M:816:HIS:CG	2.56	0.41
2:N:32:PHE:HE1	2:N:74:LEU:HD21	1.86	0.41
2:N:93:CYS:O	2:N:113:LEU:HB2	2.21	0.41
2:N:151:LEU:HD12	2:O:148:ASN:OD1	2.21	0.41
2:O:104:VAL:HG13	2:O:106:PHE:CZ	2.56	0.41
3:P:715:SER:OG	3:P:718:HIS:HE1	2.03	0.41
3:P:733:LYS:HA	3:P:733:LYS:HD3	1.75	0.41
3:P:853:VAL:HG11	3:P:860:VAL:HG21	2.02	0.41
4:Q:32:GLN:C	4:Q:50:ASP:HA	2.41	0.41
4:Q:131:VAL:HG23	4:R:136:ILE:HG12	2.03	0.41
4:R:11:GLN:HG3	4:R:26:LYS:HD2	2.02	0.41
4:R:65:LEU:CD2	4:R:119:TRP:HE3	2.33	0.41
8:D:37:DG:N3	9:E:20:DT:H4'	2.36	0.41
9:E:18:DG:N3	9:E:19:DC:N4	2.69	0.41
10:I:32:DA:N1	11:J:25:DT:C4	2.89	0.41
11:J:17:DT:H6	11:J:17:DT:H2'	1.70	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:220:LEU:HD12	1:A:220:LEU:HA	1.88	0.41
1:A:327:VAL:HG13	1:A:372:PRO:HG3	2.02	0.41
1:A:489:ARG:O	1:A:493:LYS:NZ	2.54	0.41
1:A:1013:ILE:O	1:A:1017:ILE:HB	2.21	0.41
1:A:2330:VAL:O	1:A:2330:VAL:HG13	2.21	0.41
1:A:2752:LYS:O	1:A:2756:GLU:HG2	2.21	0.41
1:A:3499:ILE:HA	1:A:3502:MET:SD	2.61	0.41
1:A:3571:PHE:CE1	1:A:3575:LEU:HD21	2.55	0.41
1:A:3789:ARG:HD3	1:A:3938:ILE:HD11	2.02	0.41
1:A:3929:MET:HG2	1:A:3940:ILE:HD13	2.03	0.41
1:F:87:LYS:HD3	1:F:831:LEU:HD13	2.02	0.41
1:F:242:PRO:HB2	1:F:246:ARG:NH2	2.36	0.41
1:F:275:PHE:CE2	1:F:319:PHE:HB2	2.56	0.41
1:F:341:PHE:HB3	1:F:345:PHE:CE2	2.56	0.41
1:F:439:VAL:O	1:F:443:ILE:HG12	2.19	0.41
1:F:745:VAL:HA	1:F:748:TYR:CD2	2.52	0.41
1:F:1342:MET:HE3	1:F:1398:VAL:HG13	2.03	0.41
1:F:1382:ILE:HD11	1:F:1385:ASN:HA	2.02	0.41
1:F:1867:ILE:HD11	1:F:1940:TYR:HB2	2.03	0.41
1:F:2251:ILE:HD12	1:F:2253:TYR:OH	2.21	0.41
1:F:2305:ASN:O	1:F:2308:SER:OG	2.28	0.41
1:F:2871:LEU:HD12	1:F:2871:LEU:HA	1.93	0.41
1:F:2923:TRP:CE3	1:F:2942:ILE:HG23	2.56	0.41
1:F:3142:ILE:O	1:F:3145:ILE:HG12	2.21	0.41
1:F:3235:LYS:HB3	1:F:3239:LYS:NZ	2.36	0.41
1:F:3516:HIS:HA	1:F:3554:PHE:HZ	1.86	0.41
2:K:188:LYS:O	2:K:192:ARG:HG3	2.21	0.41
2:O:22:VAL:HG21	2:O:34:ILE:HD12	2.03	0.41
3:P:878:PHE:O	3:P:881:THR:OG1	2.30	0.41
4:Q:132:SER:H	4:R:43:GLN:H	1.69	0.41
4:R:74:CYS:O	4:R:78:ASN:N	2.32	0.41
1:A:95:LYS:HA	1:A:95:LYS:CE	2.51	0.40
1:A:357:LYS:O	1:A:361:ILE:HG12	2.21	0.40
1:A:672:ILE:HA	1:A:675:ARG:HE	1.86	0.40
1:A:1468:LEU:HD21	1:A:1476:HIS:ND1	2.36	0.40
1:A:1569:THR:O	1:A:1573:LYS:HE2	2.20	0.40
1:A:2224:PHE:HA	1:A:2231:PHE:CE1	2.56	0.40
1:A:2481:HIS:NE2	1:A:2530:ARG:HG3	2.35	0.40
1:A:2500:LYS:HE2	1:A:2500:LYS:HB2	1.92	0.40
1:A:2761:LEU:HD12	1:A:2764:LYS:HD2	2.03	0.40
1:A:3044:MET:O	1:A:3047:SER:OG	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3074:GLN:O	1:A:3077:ILE:HG12	2.21	0.40
1:A:3189:PHE:O	1:A:3193:ILE:HG12	2.21	0.40
1:A:3319:ASN:HB2	1:A:3321:LEU:HD23	2.02	0.40
1:A:3714:GLU:OE1	1:A:3714:GLU:N	2.54	0.40
1:A:4092:GLN:O	1:A:4095:GLU:HB2	2.21	0.40
1:F:32:HIS:O	1:F:35:ILE:HG22	2.21	0.40
1:F:207:GLN:HE22	1:F:216:LYS:C	2.24	0.40
1:F:393:LYS:O	1:F:396:PHE:HB3	2.21	0.40
1:F:738:HIS:HB2	1:F:780:ILE:HD11	2.03	0.40
1:F:1372:LEU:HD22	1:F:1402:LEU:HD21	2.03	0.40
1:F:2247:ASP:OD1	1:F:2247:ASP:N	2.48	0.40
1:F:3262:LEU:HD13	1:F:3272:TRP:HH2	1.86	0.40
1:F:3712:LEU:HD13	1:F:3712:LEU:HA	1.91	0.40
1:F:3980:MET:O	1:F:3983:ILE:HB	2.22	0.40
2:K:31:GLY:HA3	2:K:47:VAL:O	2.21	0.40
2:K:51:GLU:O	2:K:54:GLN:HG3	2.21	0.40
2:O:22:VAL:HG13	2:O:24:TRP:CZ3	2.57	0.40
1:A:914:VAL:O	1:A:918:ALA:N	2.35	0.40
1:A:1087:ARG:O	1:A:1090:ARG:NE	2.53	0.40
1:A:1475:LEU:HD21	1:A:1527:ARG:HB2	2.03	0.40
1:A:2044:ASP:O	1:A:2048:GLY:N	2.53	0.40
1:A:2428:ASP:O	1:A:2432:GLN:HG2	2.21	0.40
1:A:2446:LEU:HA	1:A:2446:LEU:HD12	1.81	0.40
1:A:2461:PHE:HB2	1:A:2473:MET:SD	2.62	0.40
1:A:2834:GLN:HG3	1:A:2838:GLN:HE21	1.86	0.40
1:A:3312:VAL:O	1:A:3316:LEU:HD22	2.21	0.40
1:A:3420:CYS:HB3	1:A:3446:VAL:HG11	2.04	0.40
1:A:3999:THR:HA	1:A:4002:MET:SD	2.61	0.40
1:F:433:PRO:HA	1:F:436:GLU:HG3	2.03	0.40
1:F:634:LEU:N	1:F:635:PRO:HD2	2.36	0.40
1:F:1627:LYS:HZ2	1:F:1670:GLU:HB2	1.86	0.40
1:F:1767:CYS:HA	1:F:1822:ARG:HD2	2.03	0.40
1:F:1851:LEU:HD11	1:F:1874:TYR:CE1	2.56	0.40
1:F:1963:GLN:HB2	1:F:2125:TRP:CE2	2.56	0.40
1:F:2101:VAL:HG11	1:F:2153:THR:HG22	2.02	0.40
1:F:2219:LEU:O	1:F:2223:VAL:N	2.53	0.40
1:F:2435:CYS:O	1:F:2439:ILE:HG12	2.22	0.40
1:F:2564:GLU:HG2	1:F:2795:GLN:OE1	2.21	0.40
1:F:2850:PHE:CE2	1:F:2879:GLY:HA2	2.57	0.40
1:F:3169:PRO:HB2	1:F:3179:TRP:CH2	2.57	0.40
2:K:124:ARG:O	2:K:127:ILE:HG22	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:K:192:ARG:NH2	3:M:768:ASP:OD1	2.36	0.40
3:M:678:LEU:HD23	3:M:681:ARG:NH2	2.37	0.40
2:N:36:LEU:HD23	2:N:36:LEU:H	1.86	0.40
3:P:681:ARG:HA	3:P:684:GLU:OE1	2.21	0.40
4:R:93:ALA:HA	4:R:111:GLU:HB3	2.03	0.40
11:J:31:DT:C5	11:J:32:DT:C4	3.09	0.40
1:A:321:LYS:HD3	1:A:325:ASN:HD21	1.86	0.40
1:A:453:MET:HA	1:A:456:VAL:HB	2.03	0.40
1:A:527:TYR:HB2	1:A:629:PHE:CE2	2.56	0.40
1:A:531:PHE:HA	1:A:534:LEU:HD12	2.04	0.40
1:A:729:CYS:O	1:A:733:LEU:HD23	2.21	0.40
1:A:928:VAL:HB	1:A:2769:VAL:HG11	2.03	0.40
1:A:1430:GLU:N	1:A:1430:GLU:OE1	2.54	0.40
1:A:2268:LYS:HG2	1:A:2315:VAL:CG2	2.52	0.40
1:A:2356:MET:CE	1:A:2358:ASP:HB3	2.52	0.40
1:A:3300:VAL:HG23	1:A:3300:VAL:O	2.21	0.40
1:A:3358:ARG:O	1:A:3362:LEU:N	2.43	0.40
1:A:3517:SER:O	1:A:3521:ILE:HG13	2.21	0.40
1:A:3586:LYS:HG2	1:A:3664:ASN:HD21	1.87	0.40
1:F:51:LEU:HG	1:F:52:ALA:N	2.37	0.40
1:F:232:CYS:HA	1:F:235:THR:OG1	2.21	0.40
1:F:1093:GLU:O	1:F:1096:VAL:HG22	2.22	0.40
1:F:1098:GLN:OE1	1:F:1151:ARG:HA	2.22	0.40
1:F:1124:ILE:HG13	1:F:1125:GLN:N	2.37	0.40
1:F:1231:GLN:HG3	1:F:1235:ILE:HD11	2.04	0.40
1:F:1583:MET:SD	1:F:1628:LYS:HB2	2.61	0.40
1:F:1751:GLU:HG2	1:F:1785:ILE:HG23	2.03	0.40
1:F:2920:VAL:HG12	1:F:2947:ILE:HA	2.02	0.40
1:F:3354:ASP:N	1:F:3354:ASP:OD1	2.54	0.40
1:F:3586:LYS:HD3	1:F:3586:LYS:HA	1.95	0.40
1:F:3774:ILE:HD11	1:F:3998:LEU:HD21	2.03	0.40
2:K:176:LEU:HD11	2:L:173:GLU:HG3	2.03	0.40
2:L:8:ILE:HG21	2:L:86:PHE:CE2	2.56	0.40
3:M:845:LEU:HD21	3:M:893:TRP:HZ3	1.87	0.40
2:N:179:ARG:O	2:N:182:LEU:HG	2.21	0.40
2:N:184:LEU:O	2:N:188:LYS:HE2	2.21	0.40
2:O:20:LEU:HD21	2:O:35:THR:HG22	2.04	0.40
4:Q:1:MET:CE	4:Q:3:GLU:HG3	2.52	0.40
4:Q:54:VAL:HG13	4:Q:57:ARG:NH2	2.37	0.40
4:Q:65:LEU:HG	4:Q:66:THR:H	1.87	0.40
4:R:20:GLU:HB3	4:R:99:CYS:HB2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:D:24:DT:N3	9:E:33:DA:H2	2.18	0.40
11:J:24:DT:H2''	11:J:25:DT:N1	2.36	0.40
1:A:127:ALA:O	1:A:131:LEU:HG	2.22	0.40
1:A:147:PHE:C	1:A:148:LYS:HD3	2.41	0.40
1:A:160:LEU:HD12	1:A:161:ALA:N	2.35	0.40
1:A:643:GLU:O	1:A:646:VAL:HG22	2.22	0.40
1:A:717:LYS:HA	1:A:717:LYS:HD2	1.87	0.40
1:A:835:LYS:HB3	1:A:835:LYS:HE3	1.81	0.40
1:A:1693:VAL:HG11	1:A:1746:PHE:CG	2.56	0.40
1:A:1820:VAL:HG21	1:A:1872:GLY:HA2	2.03	0.40
1:A:2880:CYS:HA	1:A:2885:GLN:HB2	2.02	0.40
1:A:3088:LEU:HD21	1:A:3138:ILE:HG21	2.04	0.40
1:A:3164:TRP:O	1:A:3168:TYR:N	2.54	0.40
1:A:3483:MET:SD	1:A:3511:ALA:HA	2.62	0.40
1:A:3492:CYS:SG	1:A:3711:PRO:HD3	2.61	0.40
1:A:3958:LEU:HD22	1:A:4115:ASN:CB	2.50	0.40
1:A:3970:LEU:HD23	1:A:3971:MET:H	1.86	0.40
1:A:3995:PRO:O	1:A:3999:THR:HG23	2.22	0.40
1:F:208:MET:SD	1:F:252:VAL:HG11	2.62	0.40
1:F:217:LEU:N	1:F:218:PRO:HD2	2.35	0.40
1:F:341:PHE:O	1:F:344:GLN:N	2.55	0.40
1:F:763:THR:OG1	1:F:764:PRO:HD3	2.22	0.40
1:F:828:LYS:HE2	1:F:828:LYS:HA	2.04	0.40
1:F:2295:GLN:HG3	1:F:2298:GLU:H	1.85	0.40
1:F:2307:MET:CE	1:F:2363:CYS:HB3	2.51	0.40
1:F:2776:ARG:HE	1:F:2776:ARG:HB2	1.76	0.40
1:F:3320:ILE:HD13	1:F:3394:GLU:HB2	2.03	0.40
1:F:3463:LEU:HD23	1:F:3498:TRP:CH2	2.56	0.40
1:F:3508:LYS:HB3	1:F:3510:GLN:HG2	2.03	0.40
1:F:3551:ASN:O	1:F:3555:VAL:HG13	2.21	0.40
3:M:740:PRO:HD2	3:M:741:ARG:NH1	2.35	0.40
2:N:57:ASP:HB3	4:Q:62:ASN:OD1	2.22	0.40
2:O:166:VAL:O	2:O:170:GLU:HG3	2.21	0.40
4:R:31:LYS:HD2	4:R:31:LYS:HA	1.86	0.40
1:A:114:VAL:O	1:A:119:ARG:HB3	2.22	0.40
1:A:1020:PRO:HA	1:A:1073:PHE:CZ	2.57	0.40
1:A:1301:ILE:HA	1:A:1334:LYS:HZ2	1.87	0.40
1:A:1445:ARG:HB3	1:A:1510:LEU:HD11	2.03	0.40
1:A:2155:GLU:H	1:A:2155:GLU:CD	2.21	0.40
1:A:2217:ASN:O	1:A:2221:LYS:HG2	2.21	0.40
1:A:2547:SER:C	1:A:2549:LYS:H	2.24	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3035:PHE:HA	1:A:3038:GLU:CG	2.52	0.40
1:A:3325:ASP:O	1:A:3329:LEU:HG	2.21	0.40
1:A:3364:GLY:HA3	1:A:3373:VAL:HG13	2.03	0.40
1:A:3578:LEU:HD11	1:A:3681:LYS:HE3	2.04	0.40
1:A:4010:SER:O	1:A:4014:LYS:HG2	2.21	0.40
1:F:13:LEU:HB2	1:F:59:PHE:CZ	2.57	0.40
1:F:204:LEU:HD21	1:F:224:LEU:HD22	2.04	0.40
1:F:275:PHE:HE2	1:F:319:PHE:HB2	1.87	0.40
1:F:452:LYS:O	1:F:456:VAL:HG23	2.22	0.40
1:F:580:ASP:O	1:F:581:LEU:HD23	2.22	0.40
1:F:793:LEU:HD21	1:F:866:ILE:HG22	2.02	0.40
1:F:1144:SER:O	1:F:1147:LYS:NZ	2.45	0.40
1:F:1184:ARG:HD3	1:F:1266:CYS:SG	2.61	0.40
1:F:1560:TYR:CZ	1:F:1596:VAL:HA	2.57	0.40
1:F:2925:GLU:O	1:F:2929:LEU:HG	2.22	0.40
1:F:3154:GLN:O	1:F:3156:PRO:HD3	2.21	0.40
1:F:3227:ILE:O	1:F:3231:ILE:HG23	2.22	0.40
1:F:3534:ILE:O	1:F:3538:GLU:HG3	2.20	0.40
1:F:3557:ARG:O	1:F:3561:LYS:NZ	2.31	0.40
1:F:3628:PHE:O	1:F:3631:LYS:HG2	2.21	0.40
1:F:3958:LEU:HB2	1:F:4115:ASN:ND2	2.35	0.40
1:F:3998:LEU:O	1:F:4002:MET:HE3	2.22	0.40
3:M:659:PHE:HB2	3:M:685:PHE:O	2.21	0.40
3:M:815:ARG:NH1	3:M:815:ARG:HA	2.37	0.40
2:O:43:TRP:HD1	2:O:116:VAL:H	1.69	0.40
2:O:55:GLU:HB3	2:O:66:TYR:CZ	2.56	0.40
4:Q:134:HIS:HA	4:Q:137:ARG:HH21	1.85	0.40
9:E:43:DT:H2'	9:E:44:DG:N7	2.36	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	3477/4128 (84%)	3144 (90%)	328 (9%)	5 (0%)	51	85
1	F	3467/4128 (84%)	3148 (91%)	319 (9%)	0	100	100
2	K	199/336 (59%)	179 (90%)	20 (10%)	0	100	100
2	L	191/336 (57%)	182 (95%)	9 (5%)	0	100	100
2	N	199/336 (59%)	186 (94%)	13 (6%)	0	100	100
2	O	190/336 (56%)	183 (96%)	7 (4%)	0	100	100
3	M	256/911 (28%)	238 (93%)	18 (7%)	0	100	100
3	P	242/911 (27%)	218 (90%)	21 (9%)	3 (1%)	13	50
4	Q	210/299 (70%)	185 (88%)	24 (11%)	1 (0%)	29	68
4	R	219/299 (73%)	192 (88%)	26 (12%)	1 (0%)	29	68
5	a	503/609 (83%)	464 (92%)	39 (8%)	0	100	100
5	h	503/609 (83%)	471 (94%)	32 (6%)	0	100	100
6	b	640/732 (87%)	599 (94%)	41 (6%)	0	100	100
6	j	624/732 (85%)	597 (96%)	27 (4%)	0	100	100
7	c	21/204 (10%)	21 (100%)	0	0	100	100
7	i	21/204 (10%)	21 (100%)	0	0	100	100
All	All	10962/15110 (72%)	10028 (92%)	924 (8%)	10 (0%)	54	85

All (10) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	218	PRO
3	P	814	ARG
4	Q	131	VAL
1	A	216	LYS
3	P	812	MET
3	P	813	PHE
4	R	42	GLN
1	A	3170	ASP
1	A	3168	TYR
1	A	3304	VAL

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

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	3097/3671 (84%)	3082 (100%)	15 (0%)	88	93
1	F	3109/3671 (85%)	3095 (100%)	14 (0%)	88	93
2	K	180/303 (59%)	180 (100%)	0	100	100
2	L	176/303 (58%)	174 (99%)	2 (1%)	73	85
2	N	178/303 (59%)	177 (99%)	1 (1%)	86	92
2	O	177/303 (58%)	176 (99%)	1 (1%)	86	92
3	M	232/808 (29%)	231 (100%)	1 (0%)	91	94
3	P	217/808 (27%)	213 (98%)	4 (2%)	59	77
4	Q	192/262 (73%)	192 (100%)	0	100	100
4	R	200/262 (76%)	199 (100%)	1 (0%)	88	93
5	a	445/548 (81%)	444 (100%)	1 (0%)	93	96
5	h	445/548 (81%)	445 (100%)	0	100	100
6	b	583/649 (90%)	582 (100%)	1 (0%)	93	96
6	j	562/649 (87%)	561 (100%)	1 (0%)	93	96
7	c	18/160 (11%)	18 (100%)	0	100	100
7	i	17/160 (11%)	17 (100%)	0	100	100
All	All	9828/13408 (73%)	9786 (100%)	42 (0%)	91	94

All (42) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	70	ARG
1	A	217	LEU
1	A	310	LYS
1	A	476	ARG
1	A	782	ARG
1	A	1155	ARG
1	A	2263	LYS
1	A	2730	ARG
1	A	2734	ARG
1	A	3646	LYS
1	A	3734	ARG
1	A	3923	ARG
1	A	4049	ARG
1	A	4075	ARG

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Mol	Chain	Res	Type
1	A	4090	ARG
1	F	24	ARG
1	F	61	ARG
1	F	1170	LYS
1	F	1331	ASN
1	F	1727	ARG
1	F	1768	ARG
1	F	2120	ARG
1	F	2170	GLN
1	F	2311	ARG
1	F	2730	ARG
1	F	3874	ARG
1	F	4049	ARG
1	F	4075	ARG
1	F	4090	ARG
2	L	26	LYS
2	L	107	ARG
3	M	782	LYS
2	N	107	ARG
2	O	7	ARG
3	P	741	ARG
3	P	782	LYS
3	P	813	PHE
3	P	884	ARG
4	R	63	LYS
5	a	230	ARG
6	b	656	ASN
6	j	238	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (76) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	40	GLN
1	A	207	GLN
1	A	250	ASN
1	A	935	HIS
1	A	1071	ASN
1	A	1201	ASN
1	A	1331	ASN
1	A	1465	HIS
1	A	1476	HIS
1	A	1509	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	2234	ASN
1	A	2348	GLN
1	A	2352	HIS
1	A	2354	ASN
1	A	2472	GLN
1	A	2574	ASN
1	A	2954	GLN
1	A	3084	GLN
1	A	3133	GLN
1	A	3148	GLN
1	A	3166	ASN
1	A	3384	HIS
1	A	3494	GLN
1	A	3664	ASN
1	A	3743	HIS
1	F	40	GLN
1	F	192	ASN
1	F	207	GLN
1	F	330	ASN
1	F	399	GLN
1	F	753	GLN
1	F	1047	GLN
1	F	1071	ASN
1	F	1115	HIS
1	F	1201	ASN
1	F	1268	ASN
1	F	1568	ASN
1	F	1830	HIS
1	F	2170	GLN
1	F	2233	HIS
1	F	2234	ASN
1	F	2291	GLN
1	F	2295	GLN
1	F	2306	ASN
1	F	2432	GLN
1	F	2574	ASN
1	F	2971	GLN
1	F	2977	ASN
1	F	3112	GLN
1	F	3113	ASN
1	F	3162	ASN
1	F	3326	GLN

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Mol	Chain	Res	Type
1	F	3422	GLN
1	F	3515	GLN
1	F	3787	GLN
1	F	4088	ASN
2	L	18	HIS
2	L	141	ASN
3	M	718	HIS
2	N	18	HIS
2	N	137	ASN
2	O	21	GLN
3	P	718	HIS
4	Q	43	GLN
4	Q	75	HIS
4	R	62	ASN
5	a	65	GLN
6	b	350	GLN
6	b	411	HIS
6	b	488	GLN
6	b	500	HIS
6	b	551	GLN
5	h	416	GLN
6	j	33	GLN
6	j	312	GLN
6	j	614	ASN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

### 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

### 5.6 Ligand geometry [i](#)

There are no ligands in this entry.

## 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.

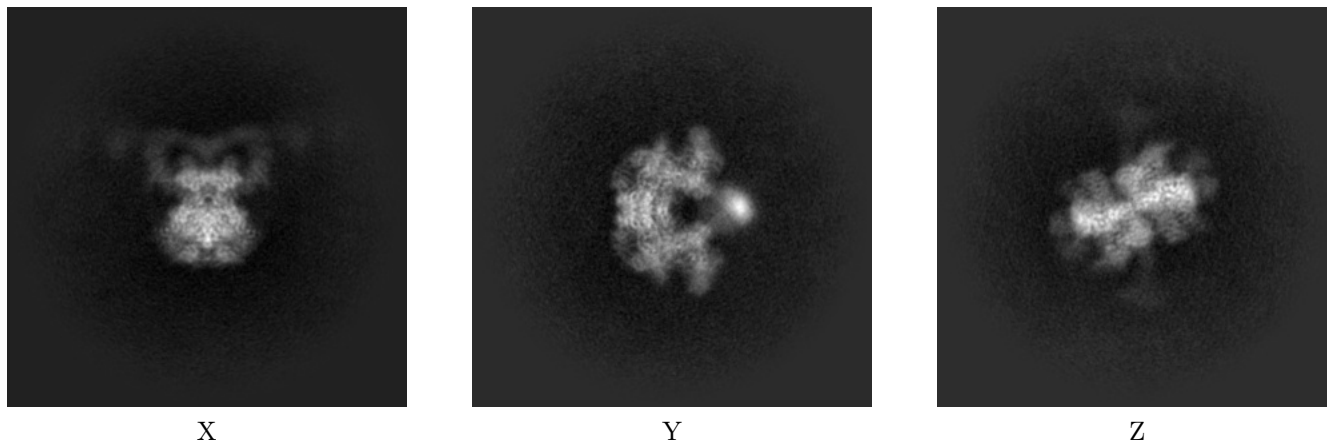
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-16070. These allow visual inspection of the internal detail of the map and identification of artifacts.

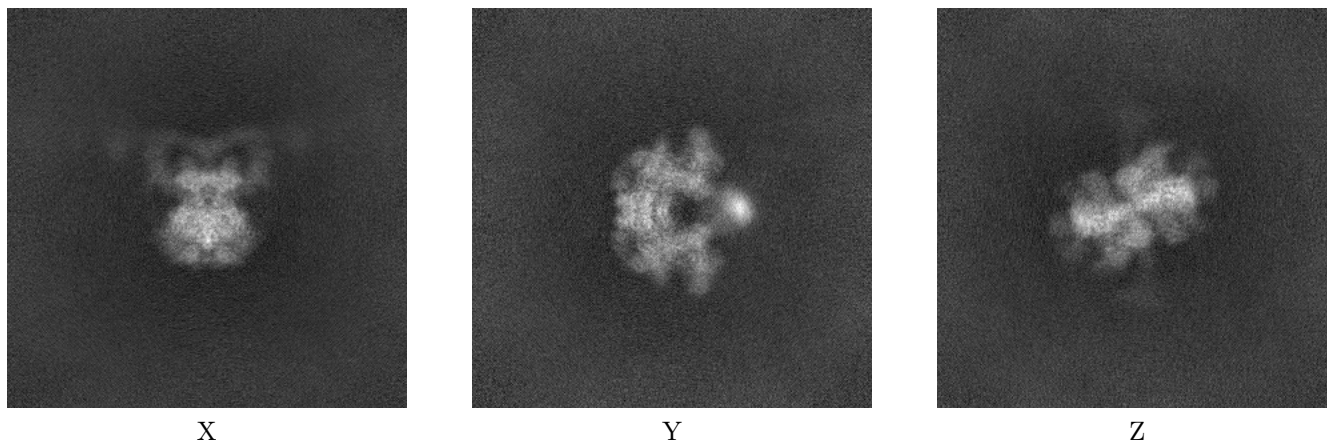
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

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

#### 6.1.1 Primary map



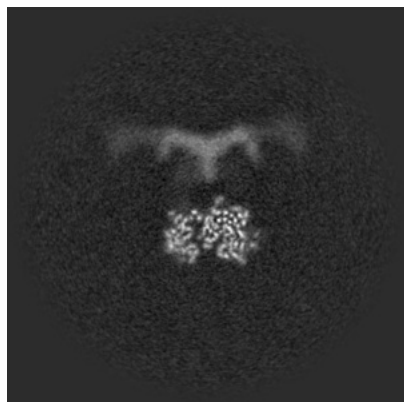
#### 6.1.2 Raw map



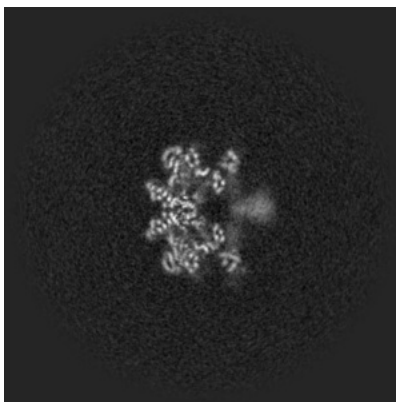
The images above show the map projected in three orthogonal directions.

## 6.2 Central slices [i](#)

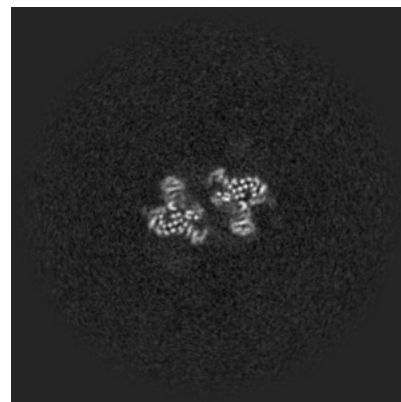
### 6.2.1 Primary map



X Index: 260



Y Index: 260

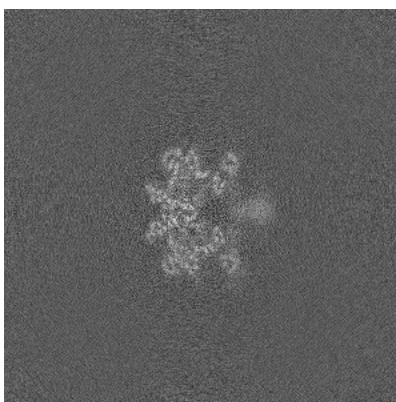


Z Index: 260

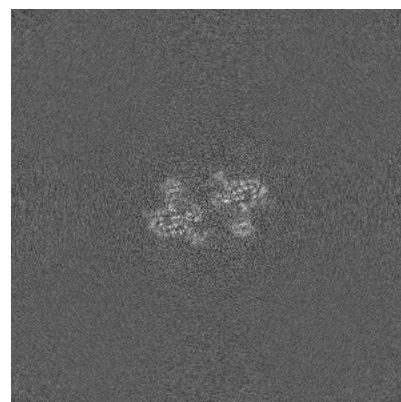
### 6.2.2 Raw map



X Index: 260



Y Index: 260

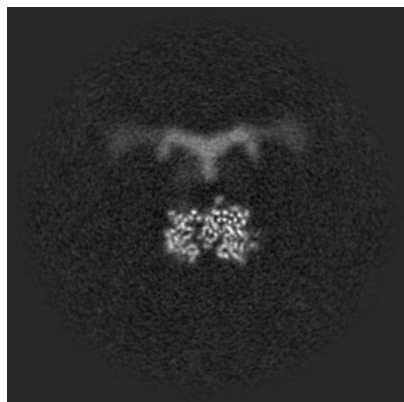


Z Index: 260

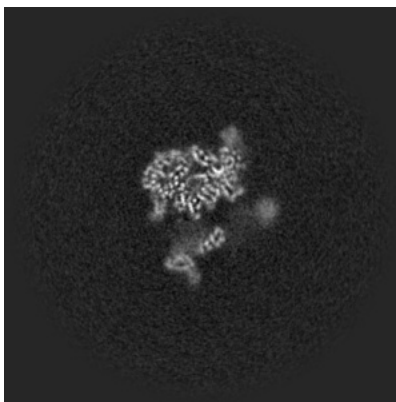
The images above show central slices of the map in three orthogonal directions.

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

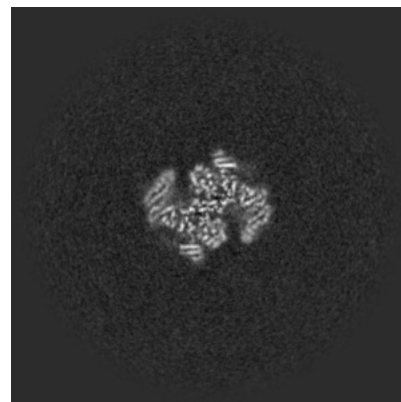
### 6.3.1 Primary map



X Index: 259

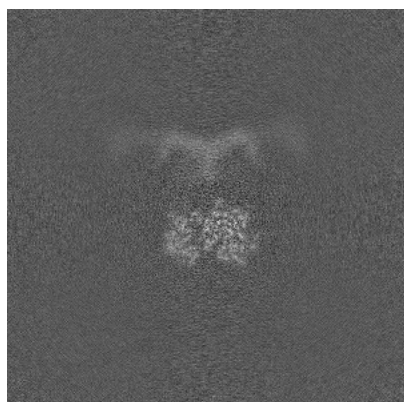


Y Index: 275

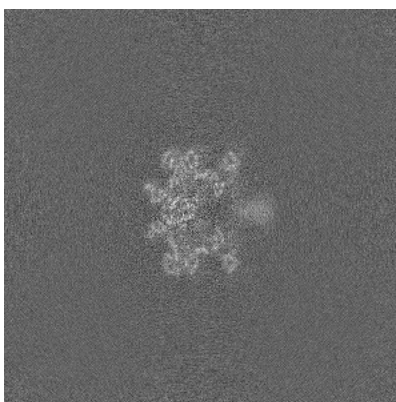


Z Index: 229

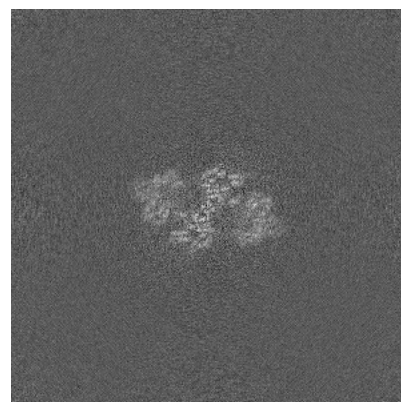
### 6.3.2 Raw map



X Index: 260



Y Index: 262

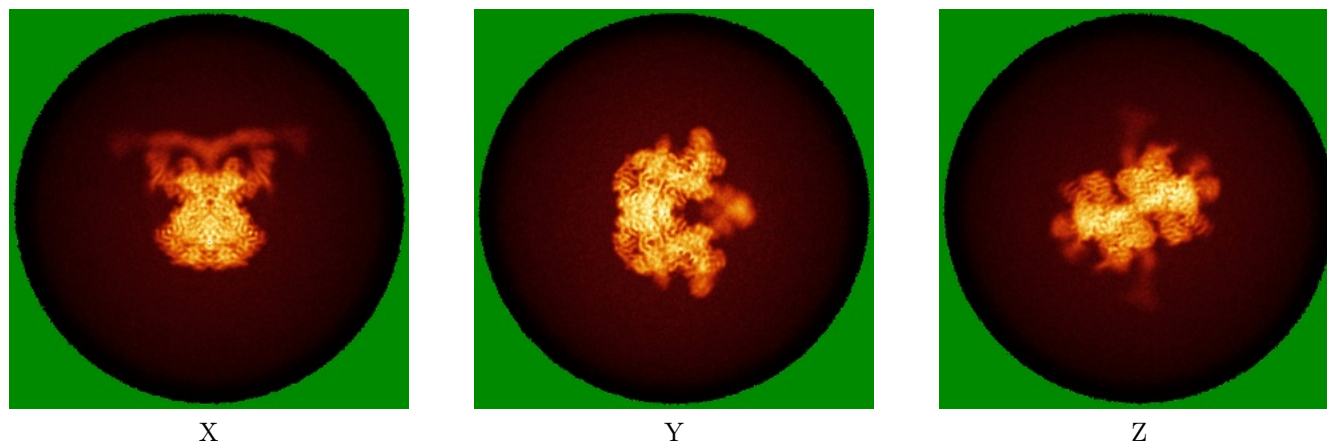


Z Index: 242

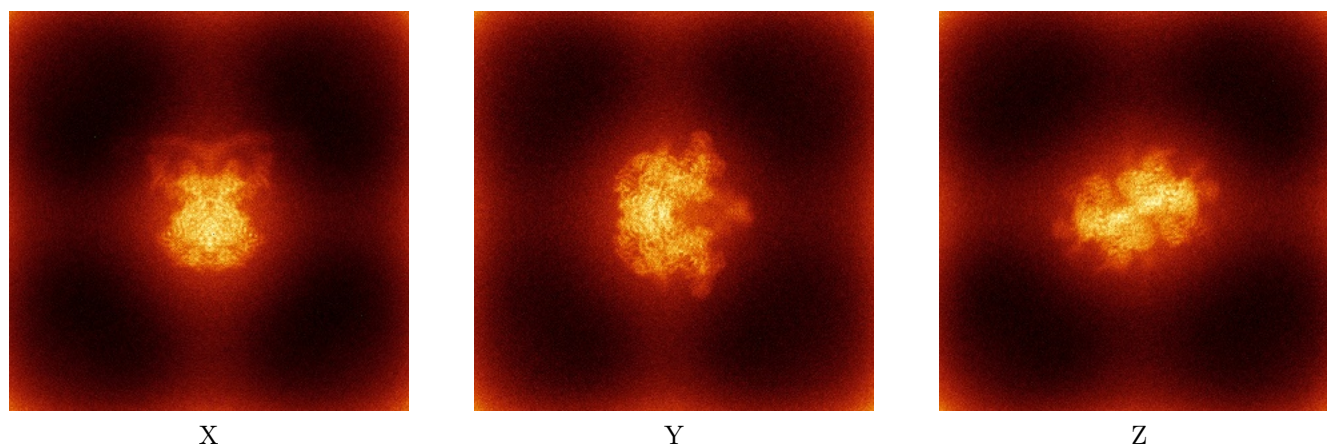
The images above show the largest variance slices of the map in three orthogonal directions.

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

### 6.4.1 Primary map



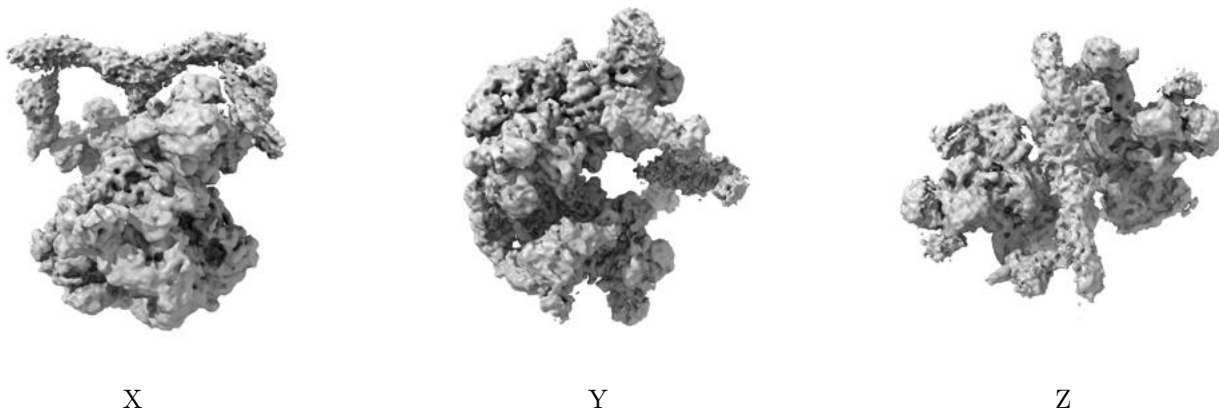
### 6.4.2 Raw map



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

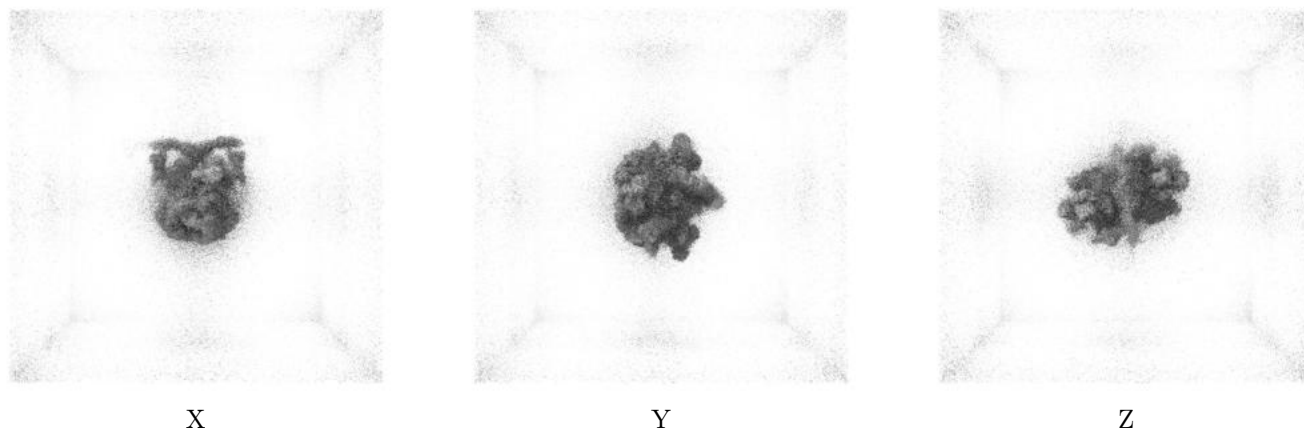
## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.168. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

### 6.5.2 Raw map



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

## 6.6 Mask visualisation [i](#)

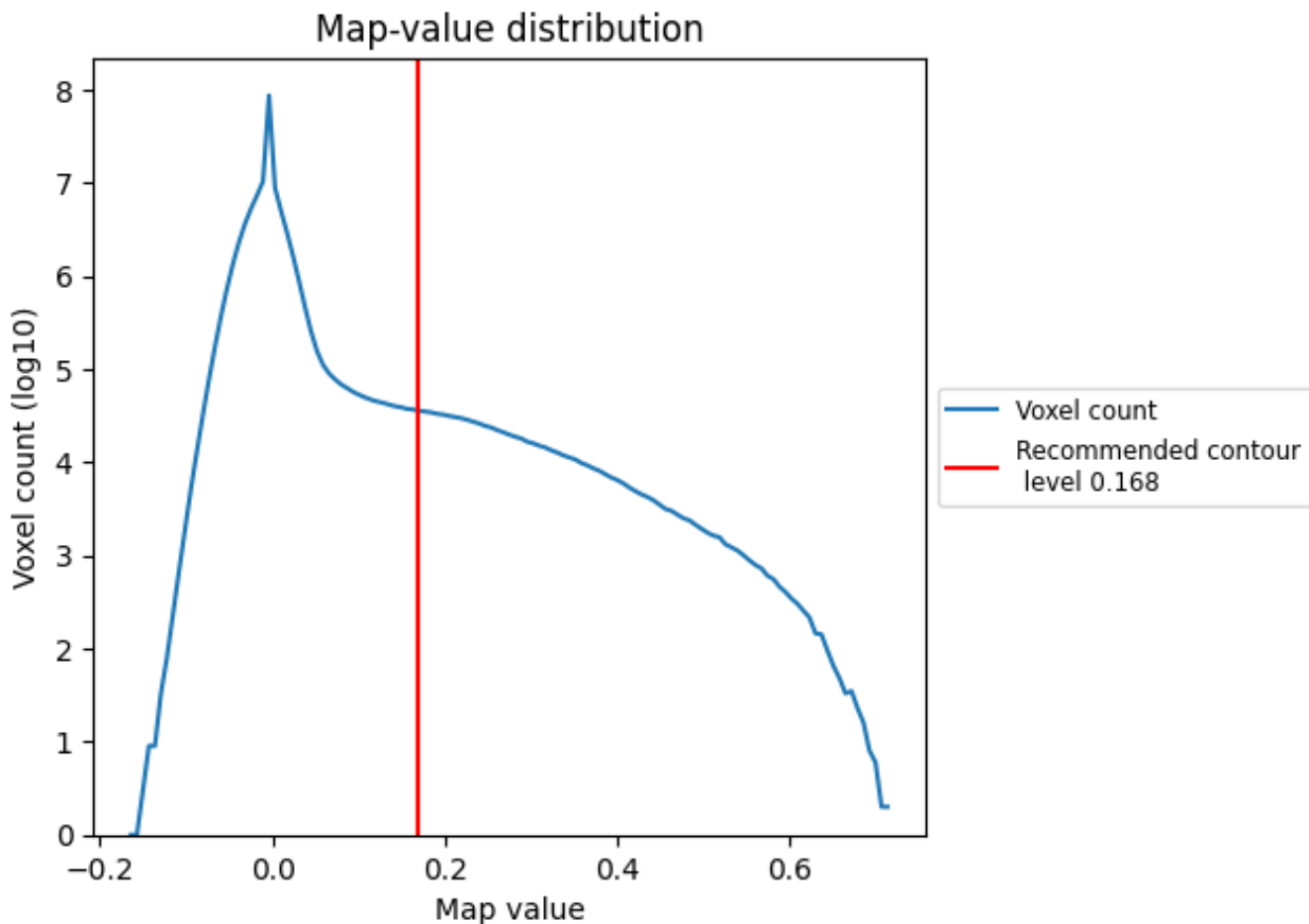
This section was not generated. No masks/segmentation were deposited.



## 7 Map analysis [i](#)

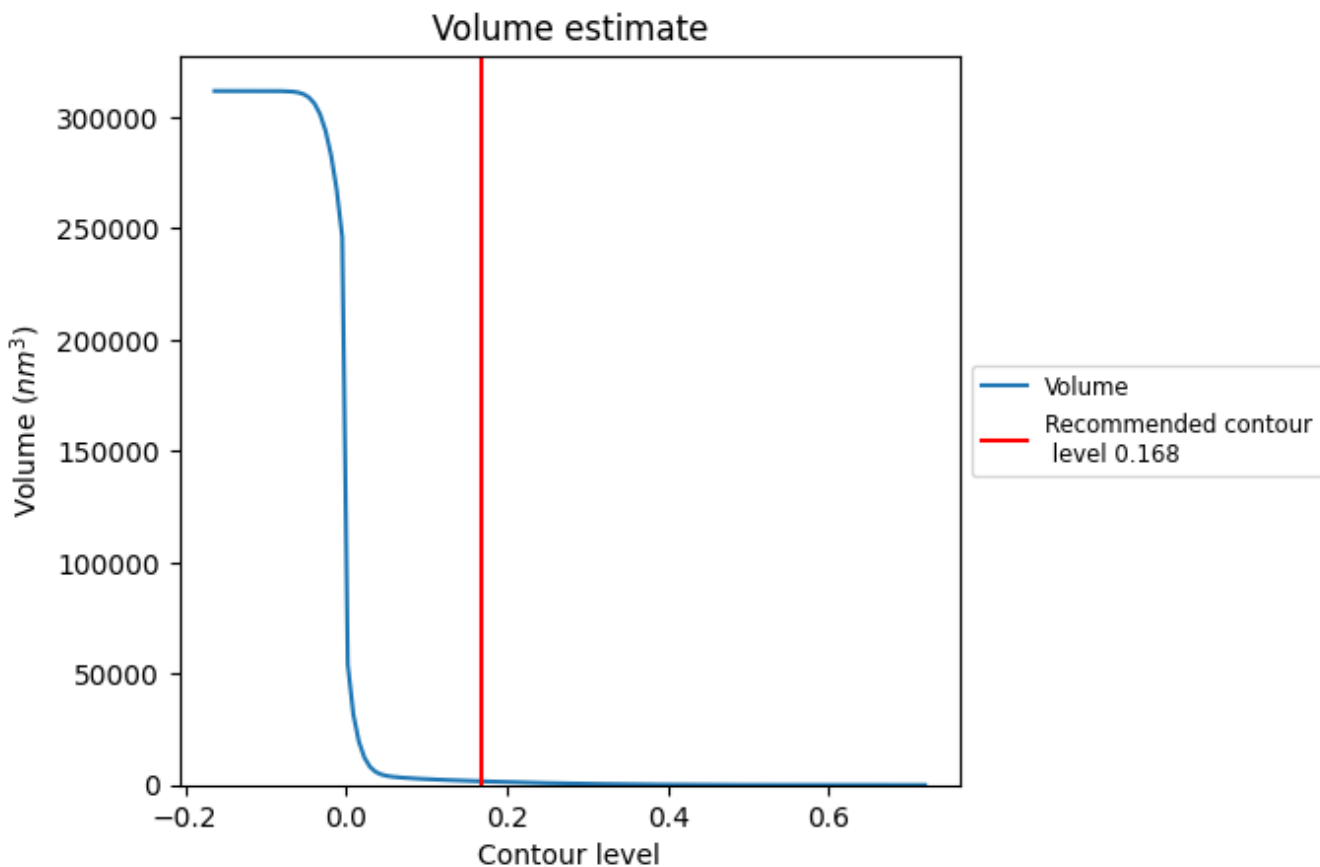
This section contains the results of statistical analysis of the map.

### 7.1 Map-value distribution [i](#)



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

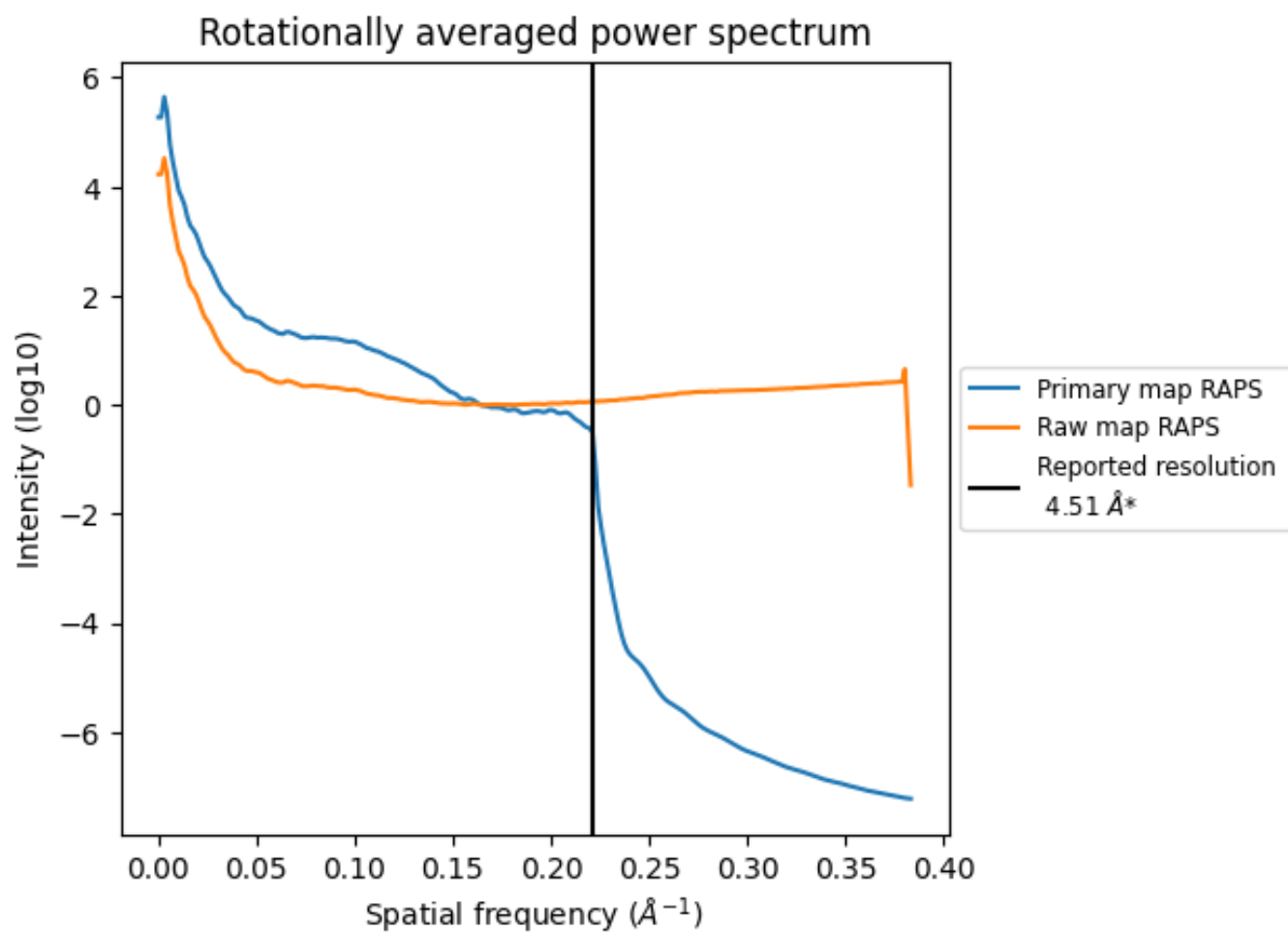
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1663  $\text{nm}^3$ ; this corresponds to an approximate mass of 1502 kDa.

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

### 7.3 Rotationally averaged power spectrum [i](#)

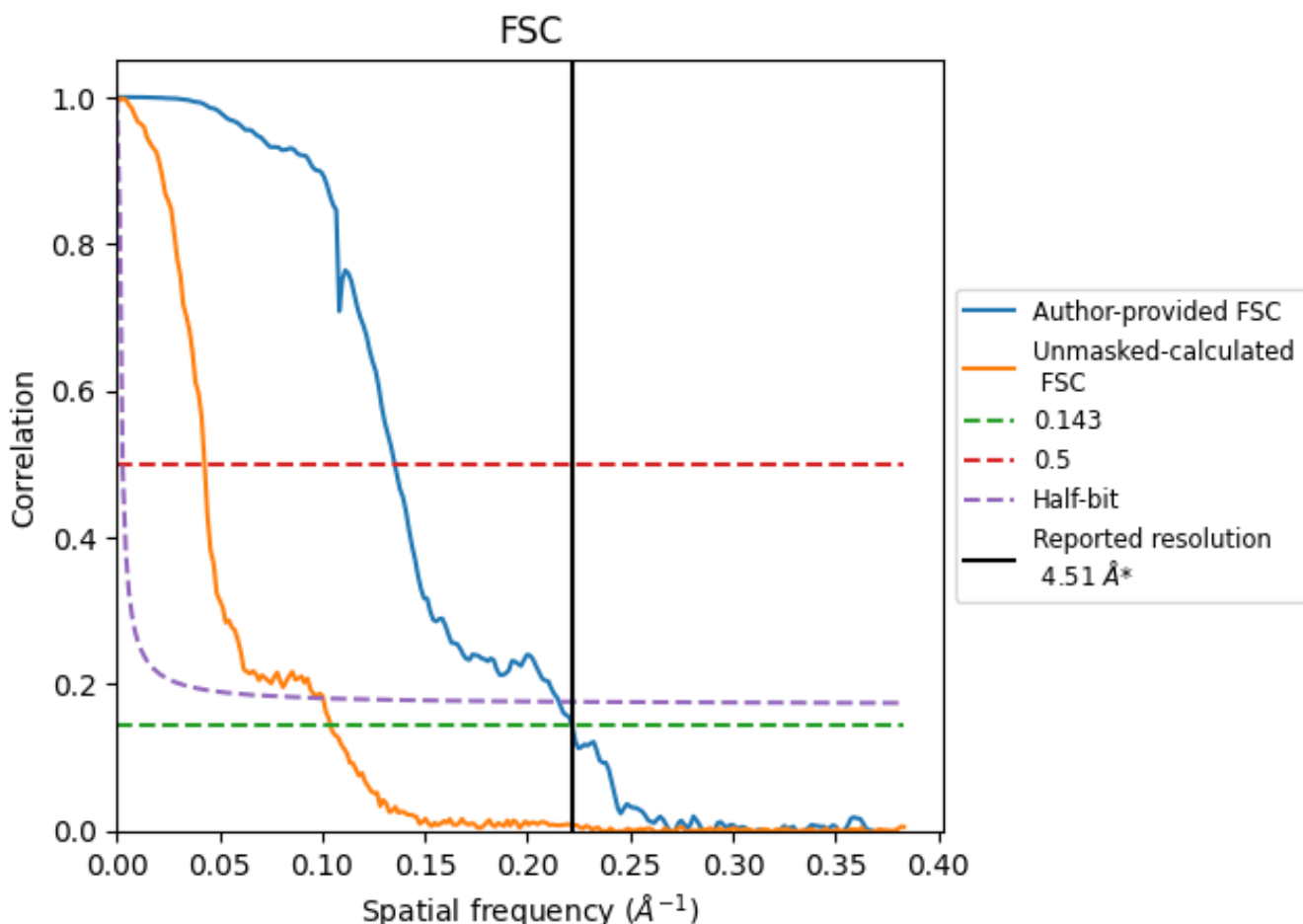


\*Reported resolution corresponds to spatial frequency of 0.222 Å<sup>-1</sup>

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

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

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of 0.222 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

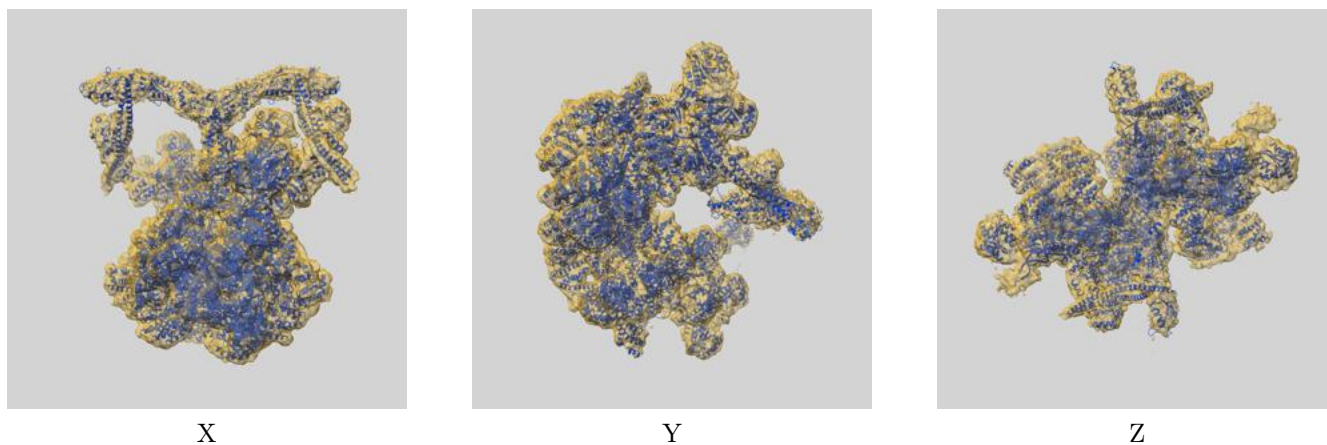
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.51	-	-
Author-provided FSC curve	4.51	7.39	4.64
Unmasked-calculated*	9.60	23.42	9.95

\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 9.60 differs from the reported value 4.51 by more than 10 %

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

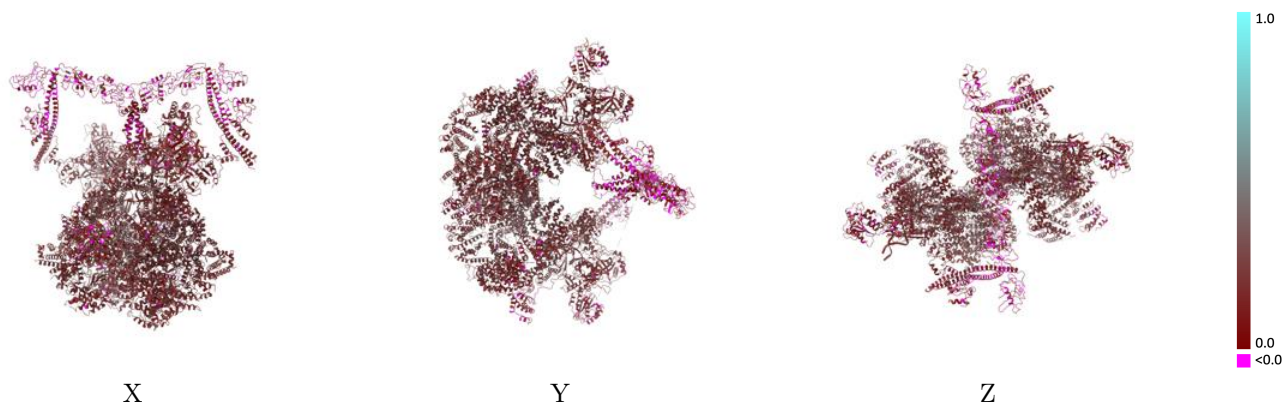
This section contains information regarding the fit between EMDB map EMD-16070 and PDB model 8BHV. Per-residue inclusion information can be found in section 3 on page 7.

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



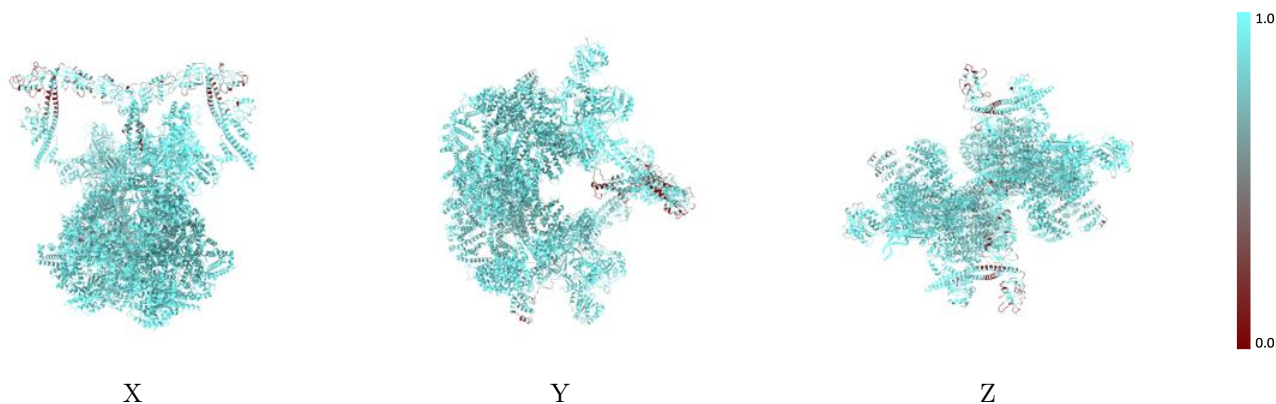
The images above show the 3D surface view of the map at the recommended contour level 0.168 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



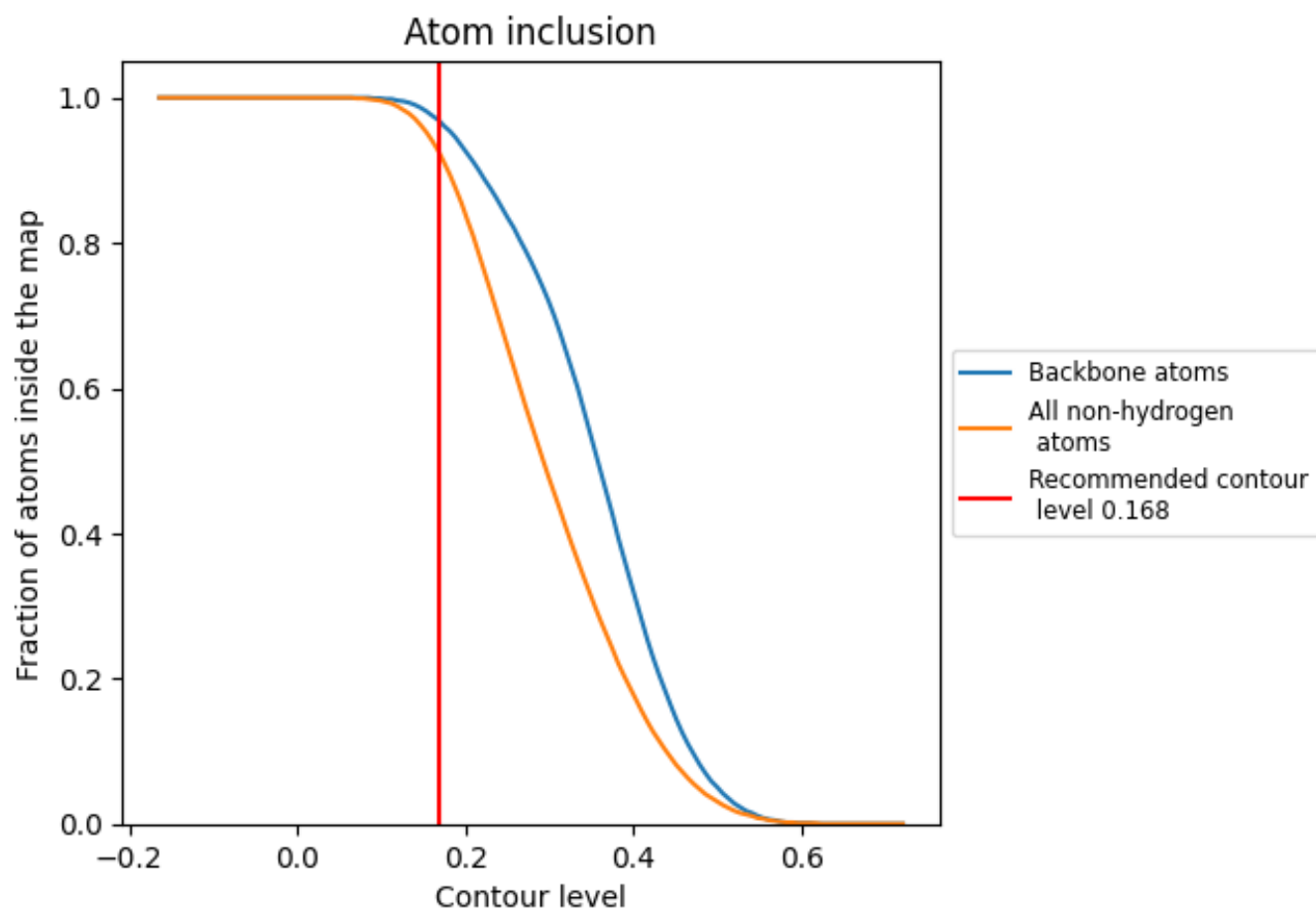
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.168).

## 9.4 Atom inclusion [i](#)













































At the recommended contour level, 97% of all backbone atoms, 93% 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 (0.168) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.9260	 0.2030
A	 0.9500	 0.2210
D	 0.9570	 0.2520
E	 0.9790	 0.2310
F	 0.9560	 0.2290
I	 0.9720	 0.2110
J	 0.9800	 0.2680
K	 0.7510	 0.0990
L	 0.6330	 0.1040
M	 0.9080	 0.1520
N	 0.8230	 0.0990
O	 0.6800	 0.1210
P	 0.9420	 0.1500
Q	 0.8030	 0.0910
R	 0.7830	 0.0720
a	 0.9610	 0.2170
b	 0.8810	 0.1760
c	 0.9700	 0.2440
h	 0.9610	 0.2310
i	 0.9940	 0.2550
j	 0.9380	 0.1920

