



Full wwPDB EM Validation Report ⓘ

Jun 21, 2023 – 05:11 pm BST

PDB ID : 8BWY
EMDB ID : EMD-16304
Title : In situ outer dynein arm from *Chlamydomonas reinhardtii* in a pre-power stroke state
Authors : Zimmermann, N.E.L.; Noga, A.; Obbineni, J.M.; Ishikawa, T.
Deposited on : 2022-12-07
Resolution : 38.00 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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev50
Mogul : 1.8.4, CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.33

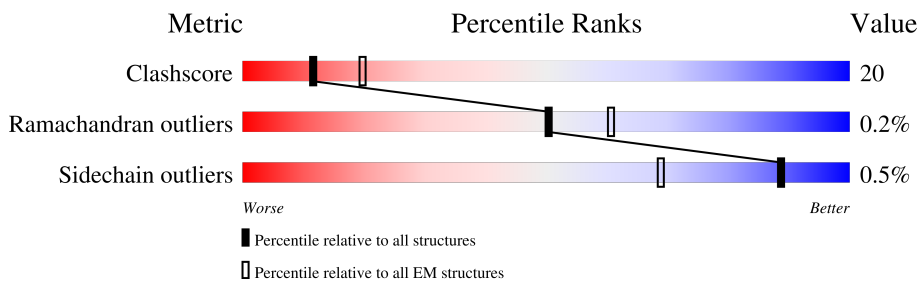
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 38.00 Å.

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



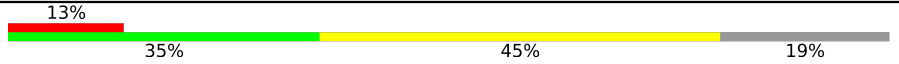
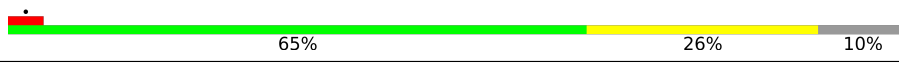
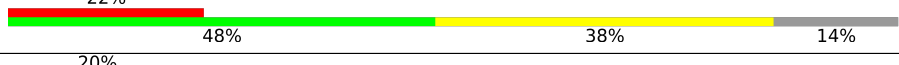
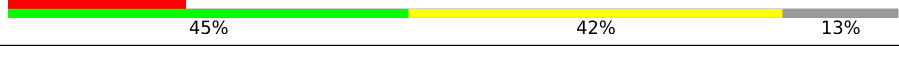


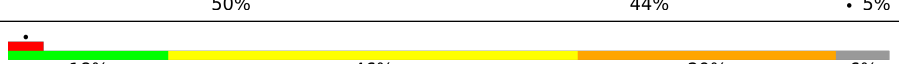
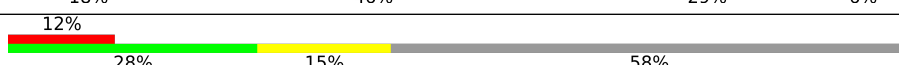
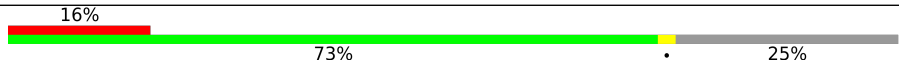
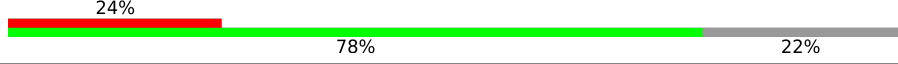

Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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

Mol	Chain	Length	Quality of chain
1	A	4168	
2	B	4595	
3	C	4620	
4	d	667	
5	e	670	
6	F	133	
7	G	159	
8	H	92	

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Mol	Chain	Length	Quality of chain
9	I	110	
10	J	93	
11	K	111	
12	L	111	
13	M	87	
14	N	132	
15	O	117	
16	P	110	
17	T	309	
18	V	130	
18	x	130	

2 Entry composition [i](#)

There are 20 unique types of molecules in this entry. The entry contains 87003 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 Dynein-1-alpha heavy chain, flagellar inner arm I1 complex protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	3455	18127	10919	3573	3623	12	0	0

- Molecule 2 is a protein called Outer arm dynein beta heavy chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	4299	25545	15697	4785	5025	38	0	0

- Molecule 3 is a protein called Dynein heavy chain, outer arm protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	4264	25046	15335	4744	4923	44	0	0

- Molecule 4 is a protein called Dynein intermediate chain 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	d	459	3626	2316	609	680	21	0	0

- Molecule 5 is a protein called Flagellar outer dynein arm intermediate protein, putative.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	e	545	3948	2473	697	759	19	0	0

- Molecule 6 is a protein called Dynein light chain roadblock-type 2 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	98	781	493	137	149	2	0	0

- Molecule 7 is a protein called Dynein light chain roadblock-type 2 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
7	G	95	744	468	128	147	1	0	0

- Molecule 8 is a protein called Dynein light chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
8	H	85	702	453	115	130	4	0	0

- Molecule 9 is a protein called Dynein light chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
9	I	89	694	443	111	136	4	0	0

- Molecule 10 is a protein called Dynein light chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
10	J	84	702	459	114	125	4	0	0

- Molecule 11 is a protein called Dynein light chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
11	K	95	803	525	134	139	5	0	0

- Molecule 12 is a protein called Dynein light chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
12	L	97	773	506	131	133	3	0	0

- Molecule 13 is a protein called Dynein light chain.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
13	M	86	726	472	122	128	4	0	0

- Molecule 14 is a protein called Dynein light chain 2A.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	N	109	Total	C	N	O	S	0	0
			897	581	154	159	3		

- Molecule 15 is a protein called Dynein light chain tctex-type 1 protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	O	111	Total	C	N	O	S	0	0
			878	558	143	174	3		

- Molecule 16 is a protein called Thioredoxin.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	P	103	Total	C	N	O	S	0	0
			847	549	134	161	3		

- Molecule 17 is a protein called Calmodulin.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	T	131	Total	C	N	O	S	0	0
			1057	655	181	215	6		

- Molecule 18 is a protein called Docking complex 1/2 protein.

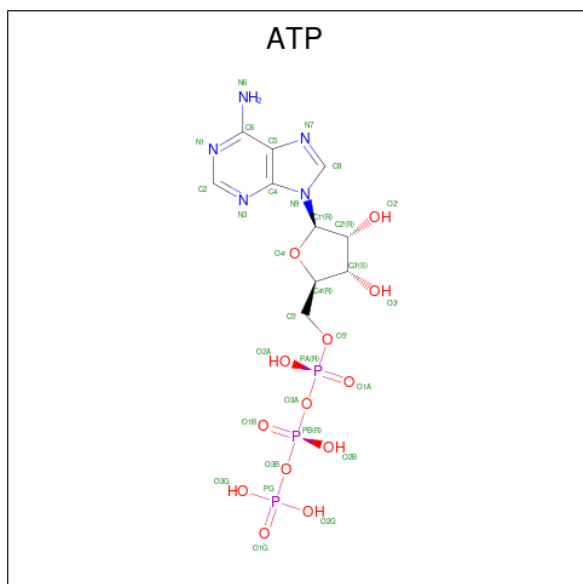
Mol	Chain	Residues	Atoms				AltConf	Trace
18	V	98	Total	C	N	O	0	0
			490	294	98	98		
18	x	101	Total	C	N	O	0	0
			505	303	101	101		

- Molecule 19 is ADENOSINE-5'-DIPHOSPHATE (three-letter code: ADP) (formula: C₁₀H₁₅N₅O₁₀P₂).

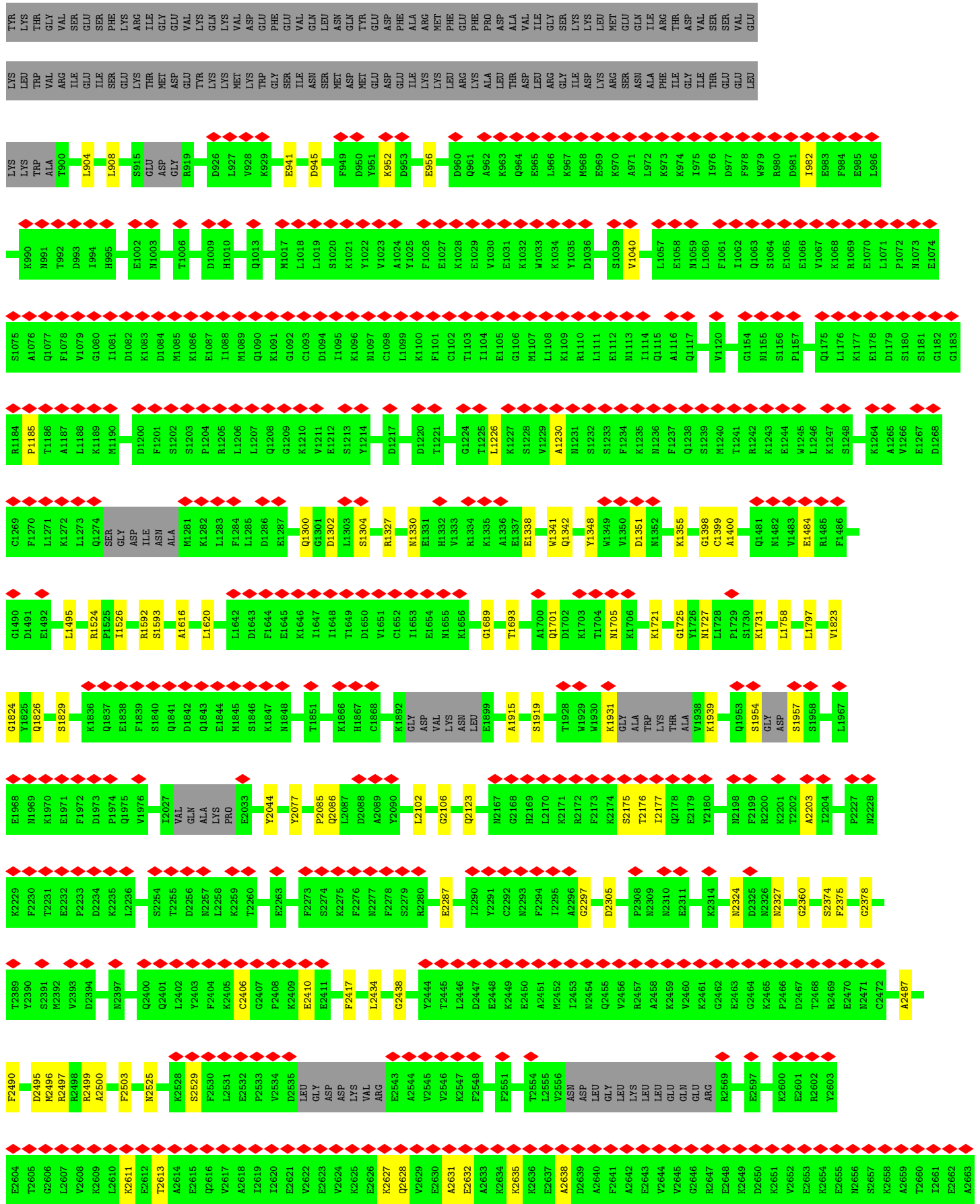


Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
19	C	1	Total	C	N	O	P	0
			27	10	5	10	2	
19	C	1	Total	C	N	O	P	0
			27	10	5	10	2	
19	C	1	Total	C	N	O	P	0
			27	10	5	10	2	

- Molecule 20 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$).

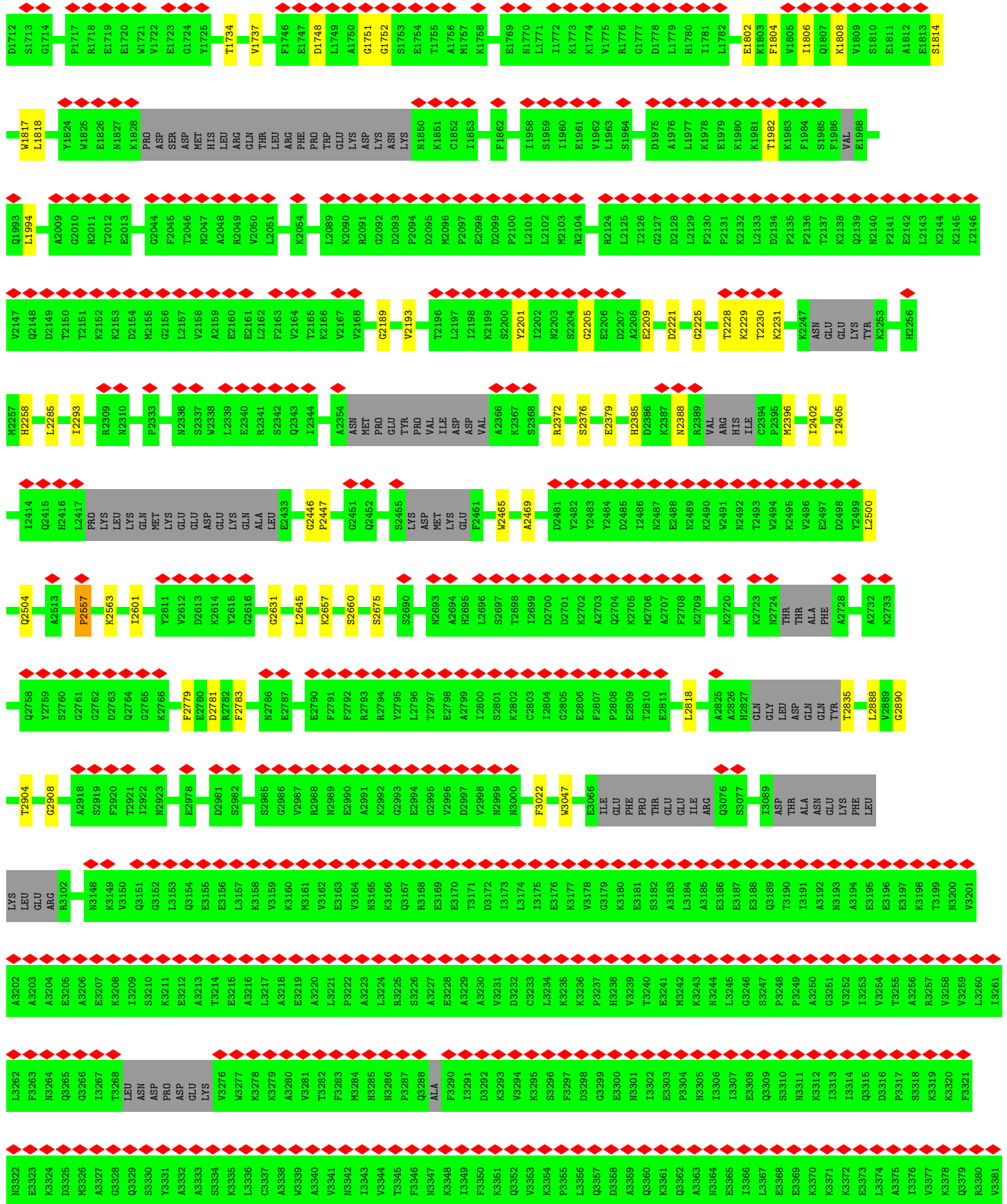


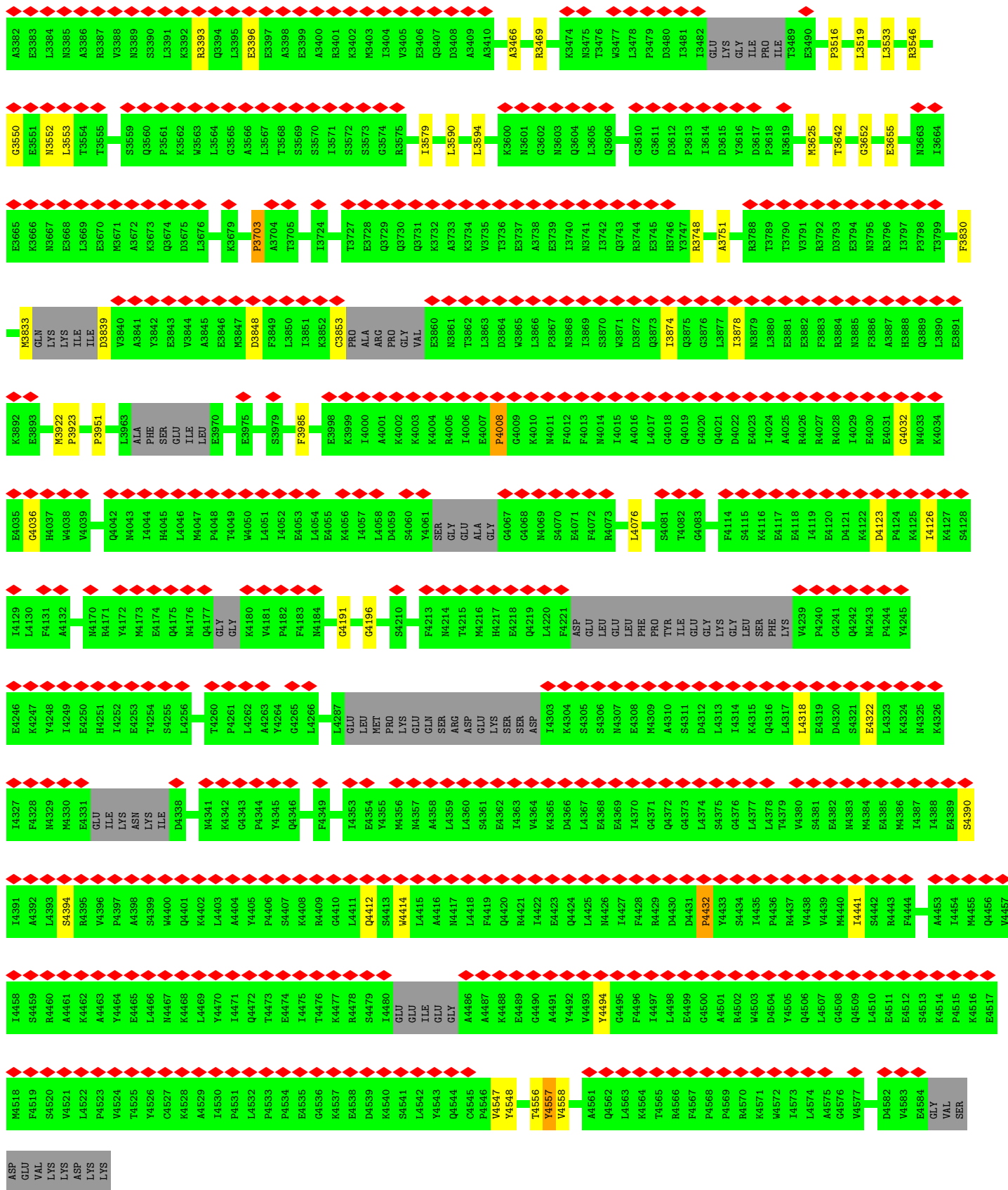
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
20	C	1	31	10	5	13	3	0



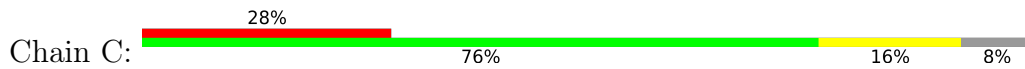
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C2666	T2726	M2786	E2846	E2906	D3044	GLY	GLN	GLY	PRO	F3595	D3713	A3896
G2667	I2727	I2787	A2847	N2907	L3045	V2201	ALA	GLU	PRO	I3596	C3714	Y3897
L2668	Y2728	K2788	V2848	E2908	L3046	A3204	GLN	GLN	GLY	K3468	D3715	R3898
L2669	L2729	K2789	V2849	R2909	E3048	K3205	GLN	GLN	GLY	A3469	K3716	K3899
K2670	L2730	M2790	K2850	N2910	S3049	V3207	ASN	GLN	LYS	L3470	K3717	Y3840
Q2671	A2731	Q2791	L2851	G2911	I3049	A3208	GLN	GLN	LYS	E3471	P3718	I3841
N2672	G2732	Q2792	M2852	K2912	A3208	A3209	GLN	GLN	GLN	T3472	P3719	E3842
N2673	Y2733	L2793	E2853	S2913	N3050	A3210	GLU	GLU	ALA	I3473	E3720	E3843
E2674	F2734	M2794	V2854	I2914	N3051	K3211	GLN	GLN	LYS	H3474	F3721	K3844
A2675	N2735	M2795	E2855	I2915	G3052	I3212	GLN	GLN	ASP	Q3475	K3722	Y3850
Q2676	GLU	S2796	V2856	E2918	K3078	T3213	GLU	GLU	SER	V3487	S3723	K3855
K2677	ALA	S2797	E2857	D2919	R3079	A3214	LYS	LYS	ASP	L3488	S3733	K3855
S2678	ILE	S2798	V2858	Q2920	G3080	K3216	GLU	ASP	PRO	F3613	G3737	S3852
S2679	ILE	T2799	R2859	M2924	K3081	I3217	GLU	GLU	MET	D3614	G3737	S3853
Q2680	ASP	P2800	K2860	V2928	N3082	N3218	ASN	ASN	SER	C3615	G3742	G3855
Q2681	LYS	E2801	L2861	V2928	G3089	E3219	LYS	GLY	PRO	A3616	G3746	G3856
Q2682	ASN	E2802	M2862	S2932	K3090	S3221	GLY	VAL	PRO	K3618	L3764	G3857
D2683	LYS	M2803	E2863	S2932	D3091	E3222	GLU	VAL	PRO	H3620	L3768	G3858
L2684	LYS	A2804	E2864	K2943	L3092	E3224	GLU	GLU	PRO	W3746	L3772	G3859
D2685	LYS	S2805	L2865	K2943	L3093	Y3224	GLN	GLN	PRO	E3496	L3776	G3860
A2686	VAL	K2806	M2866	M2947	I3094	R3225	GLU	PRO	GLY	E3497	L3777	K3861
A2687	VAL	S2907	K2867	I2948	H3095	E3268	GLU	GLU	GLY	K3498	S3769	K3862
Q2688	VAL	A2808	L2868	M2949	H3095	N3269	GLU	GLU	ASN	W3650	K3770	K3890
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V2691	VAL	K2811	E2871	M2952	L3139	N3269	GLY	TYR	GLY	L3644	D3773	G3893
E2692	VAL	K2812	M2872	N2953	V3139	N3269	VAL	TYR	PRO	L3644	D3777	K3894
Q2693	VAL	L2813	D2873	M2954	E3171	N3269	VAL	GLY	PRO	GLU	Y3781	K3895
A2694	VAL	C2814	K2874	M2955	L3172	N3269	GLU	THR	VAL	SER	E3785	K3896
K2695	VAL	S2815	A2875	K2956	L3173	N3269	GLU	THR	VAL	VAL	Y3781	K3897
S2696	VAL	M2816	L2876	F2957	L3174	N3269	GLY	THR	VAL	PHE	Y3781	K3898
A2697	VAL	V2817	A2877	M2958	Y3174	N3269	ALA	GLY	PRO	ALA	E3785	K3899
L2698	VAL	V2818	E2878	K2959	K3175	N3269	GLY	GLY	PRO	SER	S3811	D3900
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S2700	VAL	L2820	M2880	HIS	L3177	N3269	GLY	VAL	PRO	T3653	E3812	F3901
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D2705	VAL	Y2825	E2885	MET	K3180	N3269	VAL	VAL	PRO	P3665	N3817	P3906
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Q2707	VAL	L2827	E2887	R3023	D3182	N3269	GLY	E3436	VAL	N3667	N3819	D3908
Q2708	VAL	Q2828	R2888	K3027	L3184	N3269	GLY	E3437	VAL	N3667	L3820	F3909
A2709	VAL	D2829	C2889	K3028	L3185	N3269	ASN	D3437	VAL	N3667	A3821	N3910
K2710	VAL	V2830	R2890	N3029	D3186	N3269	GLN	E3438	VAL	N3667	PRO	K3911
S2711	VAL	E2831	R2891	N3030	L3187	N3269	GLY	H3438	VAL	N3667	GLN	L3912
F2712	VAL	P2832	E2892	N3031	L3188	N3269	GLY	H3438	VAL	N3667	GLN	L3913
A2713	VAL	K2833	L2893	L3031	L3189	N3269	GLY	H3438	VAL	N3667	GLN	L3914
S2714	VAL	R2834	M2894	S3038	E3191	N3269	GLY	H3438	VAL	N3667	GLN	E3915
P2715	VAL	K2835	L2895	K3039	N3192	N3269	GLY	H3438	VAL	N3667	GLN	E3916
F2716	VAL	A2836	L2896	N3040	L3193	N3269	GLY	H3438	VAL	N3667	GLN	E3917
A2717	VAL	K2838	Q2897	I3041	L3194	N3269	GLY	H3438	VAL	N3667	GLN	E3918
G2718	VAL	E2839	R2898	L3041	Y3195	N3269	GLY	H3438	VAL	N3667	GLN	E3919
V2719	VAL	E2839	L2899	L3041	S3196	N3269	GLY	H3438	VAL	N3667	GLN	K3921
F2720	VAL	A2840	V2900	L3041	K3197	N3269	GLY	H3438	VAL	N3667	GLN	N3936
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V2722	VAL	E2842	A2902	L3041	K3198	N3269	GLY	H3438	VAL	N3667	GLN	L3939
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V1582	F1456	W1330	Y1268	V1207	L1139	L1076	ASP	N935	I718	I718
G1583	E1457	R1331	H1269	K1208	L1140	R1077	GLU	D936	V719	V719
W1584	F1458	Q1332	K1270	M1141	S1141	M1078	GLY	N939	D720	D720
S1585	T1459	I1333	K1271	M1142	M1142	M1079	GLY	I940	N721	N721
E1460	E1460	K1334	T1272	V1143	V1143	L1080	GLY	P962	H724	H724
A1587	T1464	A1335	L1214	M1144	M1144	Q1081	ASP	F955	I725	I725
I1588	K1464	E1336	E1216	K1146	K1146	P1082	ASP	K800	K726	K726
K1589	K1466	I1337	E1275	L1147	L1147	M1083	ASP	L956	T727	T727
K1590	T1466	L1338	G1276	S1148	S1148	K1084	GLY	Q957	C728	C728
C1591	V1494	L1339	R1277	D1149	D1149	T1085	GLU	I958	L729	L729
T1645	Y1498	D1340	E1280	V1150	V1150	A1086	ASN	R960	L730	L730
F1646	D1499	K1341	Y1281	K1151	K1151	A1087	THR	S961	V731	V731
E1647	D1499	N1342	I1222	D1152	D1152	L1087	GLU	F962	E733	E733
P1648	D1503	K1343	L1284	V1153	V1153	D1088	LYS	F963	E734	E734
P1649	K1507	L1344	E1285	E1154	E1154	A1089	GLN	E964	P735	P735
A1650	E1507	G1346	K1286	R1156	R1156	R1090	GLN	I965	L736	L736
N1651	E1536	I1349	L1287	R1157	R1157	V1091	P1035	K966	V737	V737
A1652	R1539	K1350	F1288	E1158	E1158	T1092	P1036	Q967	K738	K738
A1654	E1544	L1352	L1290	G1159	G1159	R1093	L1037	L969	K739	K739
K1657	K1547	P1353	Q1291	I1160	I1160	W1094	K1038	N971	K740	K740
V1658	V1548	K1354	M1294	T1162	T1162	I1095	G1039	I972	I741	I741
G1659	F1549	E1355	Y1295	R1163	R1163	R1096	C1040	C983	D742	D742
I1660	G1551	I1356	E1296	M1164	M1164	V1097	R1041	N984	Q743	Q743
G1661	V1552	R1357	L1298	K1165	K1165	T0998	A1042	Q985	Q835	Q835
K1669	V1553	F1359	D1300	E1166	E1166	T1099	K1043	F986	I836	I836
V1670	K1554	K1360	K1299	V1168	V1168	D1100	K1044	R987	Q837	Q837
P1671	E1555	G1361	C1301	M1169	M1169	F1101	P1045	A988	K838	K838
F1672	F1556	N1362	M1302	K1170	K1170	L1102	M1046	R989	V840	V840
S1673	V1557	Y1363	Q1304	L1171	L1171	V1103	L1047	F990	K841	K841
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F1691	S1561	V1367	D1247	V1176	V1176	R1107	D1051	S994	A949	A949
R1692	E1562	K1370	K1306	P1177	P1177	T1108	E1052	Y995	D850	D850
M1693	V1563	ASN	L1307	I1178	I1178	T1109	K1053	L996	K851	K851
R1694	S1564	MET	L1308	L1179	L1179	Q1110	T1054	W997	Q852	Q852
E1695	A1565	GLY	L1309	E1180	E1180	K1111	H1056	T998	N854	N854
T1696	M1566	THR	F1320	K1181	K1181	M1112	H1057	F999	H855	H855
L1697	P1567	VAL	H1317	D1184	D1184	L1113	L1057	E999	Q856	Q856
K1698	S1568	VAL	H1319	D1185	D1185	L1114	K1058	D1000	N860	N860
E1699	V1569	VAL	G1321	P1186	P1186	F1115	A1059	E1001	W859	W859
I1700	E1571	ALA	Q1321	Q1188	Q1188	L1116	Q1061	ILE	D763	D763
I1701	A1572	LEU	H1322	Q1189	Q1189	L1117	Q1062	PHE	Q764	Q764
E1702	C1573	LEU	Y1322	I1190	I1190	E1118	E1063	SER	F765	F765
G1703	T1574	LEU	N1323	M1196	M1196	K1119	Q1062	ASN	N861	N861
A1704	I1575	LEU	N1324	F1197	F1197	K1121	E1063	ASN	Y862	Y862
N1705	E1576	LEU	M1258	I1200	I1200	K1122	S1065	ARG	N864	N864
N1706	R1577	HIS	N1259	I1203	I1203	G1123	S1065	PHE	V865	V865
T1707	R1578	GLU	W1325	I1203	I1203	L1124	S1066	LEU	V866	V866
D1709	D1579	GLU	D1262	I1196	I1196	K1125	R1066	ASP	V867	V867
L1710	W1711	ASP	I1263	F1199	F1199	M1127	T1067	ASN	I868	I868
			M1264	M1196	M1196	K1068	K1068	GLU		
			M1265	F1197	F1197	T1069	T1069	PRD		
			V1266	I1200	I1200	P1070	P1070			
				R1203	R1203	E1071	E1071			
						D1072	D1072			
						I1073	I1073			
						S1074	S1074			

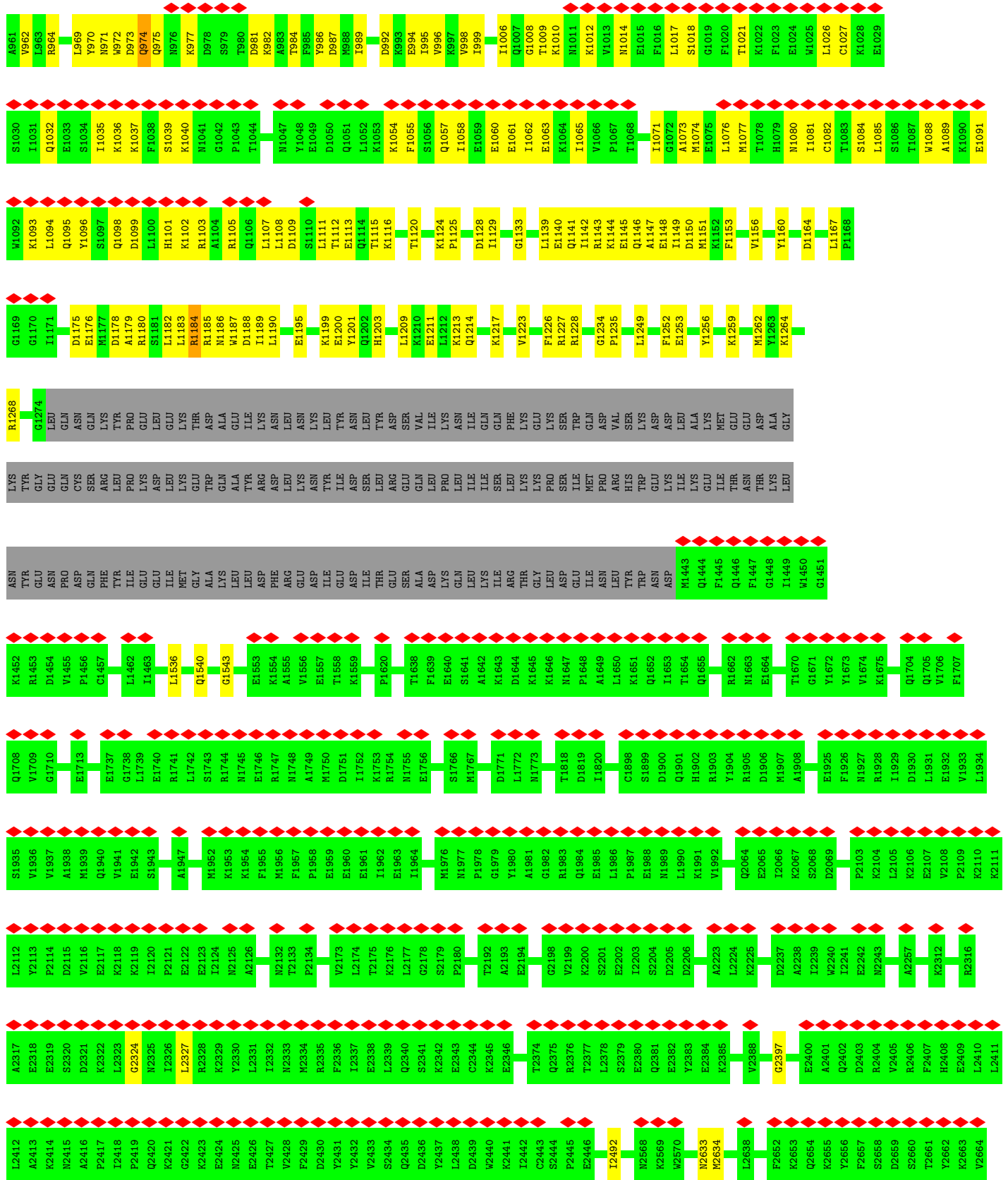


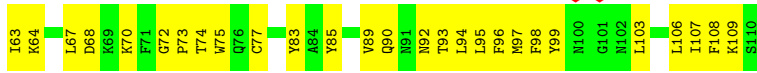


• Molecule 3: Dynein heavy chain, outer arm protein

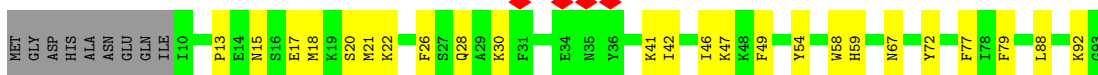


MET	LEU	SER	SER	LYS	TYR	S7	R8	R9	W12	M13	K14	T15	T16	I17	C18	D19	S20	L21	Q22	L23	K24	D25	M26	I27	V28	E29	F30	S31	F32	Q33	Q34	Y34	E35	K36	N37	K38	N39	L40	F44	L45	S46	G47	E48	N51	K52	I53	F54	A55	Y56	Y57	Q58	V59	Q60	B61	Q62	A63	Q64
N65	D66	D67	K68	K69	D70	T71	A72	G73	Q74	D75	P76	V77	L78	F79	F80	T81	T82	L85	E86	K87	I88	Q89	D90	K91	A92	V93	W94	F95	L96	R97	I98	T99	M100	P101	A102	D103	D104	K105	K106	K107	Q110	Q111	D115	N116	D117	I118	I119	E122	Q123	T124	P125	N126	T127	M130			
L131	M132	A133	L134	E135	E136	S137	V138	Y139	S140	R141	Q142	I143	D144	H145	I146	I147	E148	E149	K150	I151	Q152	E160	Q161	V162	L163	E164	F165	Q166	S169	F172	E175	V176	R177	E178	A179	I181	L182	M183	G186	D193	D199	I197	S198	L200	S203	Q207	E210	K211									
K212	F213	M214	E215	W216	I217	M218	S221	N225	ASP	ASP	SER	GLU	VAL	R231	E234	P239	T241	E242	L243	I244	R247	S248	R249	M250	Q251	I253	T254	N255	W256	S257	E258	Q259	L260	K261	S262	K263	D264	I267	V268	K269	R274	H275	K276	G199	M277	D278	D279	N280	Q281	K282	P283						
R284	E287	S288	LEU	SER	LYS	LEU	MET	GLU	TYR	ASN	ARG	LEU	ASP	LEU	LEU	THR	ASP	LYS	L307	K311	E312	N313	V314	K315	Y316	L317	T318	L319	L320	E321	K322	F323	I324	E325	P326	L327	Y328	M329	G330	T331	P332	Q333	Q334	I335	I336	D337	T338	L339	P340	M343	M344	A345	I346				
I349	I352	A353	R354	F355	Y356	M357	K361	M362	L365	K368	I369	T370	N371	Q372	R373	I374	K375	N376	D379	R380	I381	L382	N383	LYS	ASP	ASN	GLY	ASP	ASN	PRO	SER	LEU	TYR	LYS	M396	I397	W398	E399	Q400	D401	P402	A403	E404	L405	I406	E407	W408	L409	G410	S411	C412	I413					
K414	L415	Y416	C417	E418	Y419	K420	K421	C422	W424	D425	T426	K427	E428	K429	V430	A431	D432	M433	P434	K435	T438	F439	D440	F441	S442	D443	I446	F450	D451	T452	F453	R454	R455	R456	L457	Q458	K459	L460	I461	F464	I467	Q468	Q469	F470	M477	L478	E479	G480	M481	D482	V483	L484					
T485	M486	K487	F488	K489	K490	I491	I492	D493	F494	K496	G499	L502	N507	N508	K509	F510	D511	R512	D513	W514	V515	I521	S522	H523	L524	L528	Q529	F531	I532	D533	N534	F535	F536	N537	R538	N541	I542	E543	Y544	S545	L546	K547	L548	L549	H550	K551	F552	Q553	S554	T555	I556						
K557	R558	D559	S560	L561	K562	H563	L565	N564	T566	R568	Y569	N570	A571	I572	L573	H574	N575	Y576	A577	T578	E579	L580	D581	T582	R585	Q588	D589	Q590	K591	S592	N593	L596	V597	R598	P601	P602	E603	K606	I607	I608	W609	L613	T618	I621	N622	I623	F624	P625	E626	N627							
V628	I629	N630	S631	T632	E633	I634	R635	R636	Y637	Y638	G639	S640	W641	N642	T643	L644	G645	K646	Q647	L648	T649	I650	G787	Y651	E652	M653	W654	F655	Y656	V660	I663	K667	Q671	L674	I675	V676	R677	H678	D679	V686	N687	F688	D689	I692	N693	Q694	L695	R696	R697	E698	K700	C701					
Q705	I715	I716	E720	F723	K743	I744	K745	W750	L751	L752	L753	P754	H755	I756	I769	W772	V784	H785	Q786	G787	L788	K789	K790	K791	N852	L791	W853	E854	R857	A858	V859	L862	L868	Y869	P870	L871	D872	P873	H874	L810	V875	D876	P877	S814	K815	V816	W817	L818									
W819	H820	L821	P822	GLN	ASP	THR	LYS	PRO	LEU	SER	LEU	ASP	SER	PHE	VAL	GLN	LEU	GLN	GLU	GLY	TYR	I1E	ASN	SER	LYS	N852	L791	W853	E854	R857	A858	V859	L862	L868	Y869	P870	L871	D872	P873	H874	L810	V875	D876	P877	S814	K815	V816	W817	L818								
R885	I886	K887	R888	W892	Y895	Q896	A897	L898	L899	N900	S901	T902	Q903	N904	S905	N909	K910	K911	K912	K913	G920	A921	N922	T923	L924	Q925	N926	L927	K928	P929	Q932	V933	E934	V935	Q936	L937	N938	G939	D940	K941	Y942	T943	L944	N945	P946	S947	L948	I951	Q952	R957	T960						

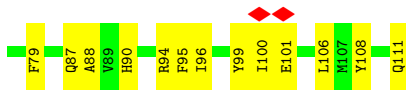
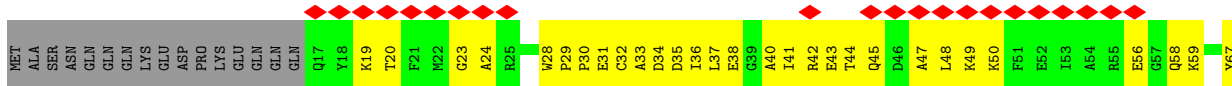




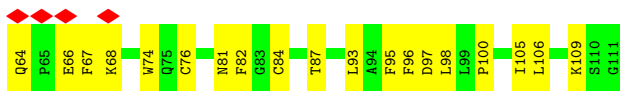
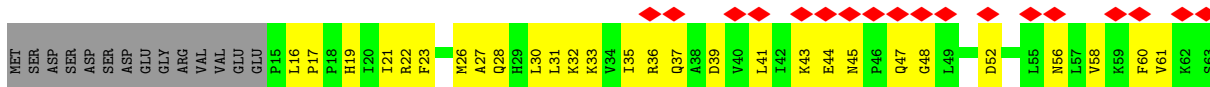
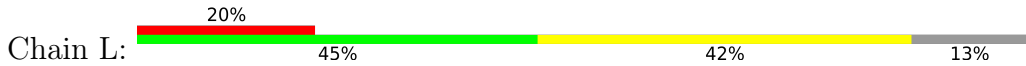
• Molecule 10: Dynein light chain



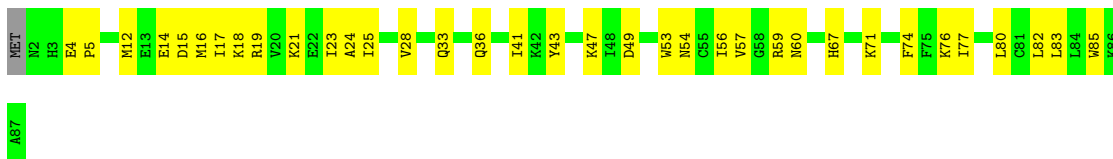
• Molecule 11: Dynein light chain



• Molecule 12: Dynein light chain



• Molecule 13: Dynein light chain

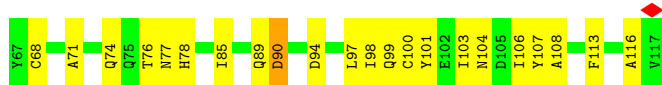
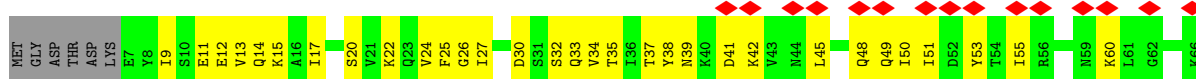


• Molecule 14: Dynein light chain 2A

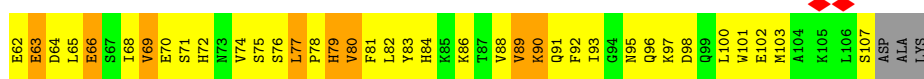
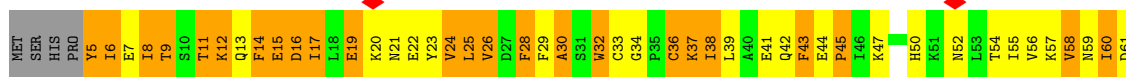
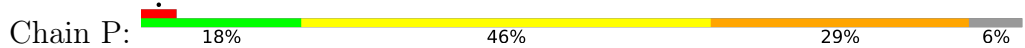




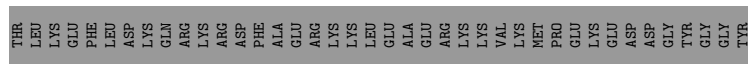
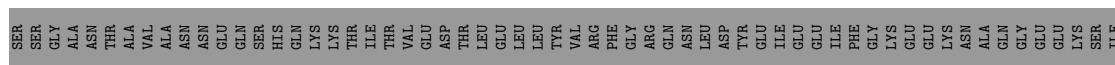
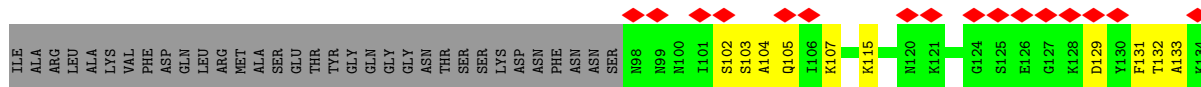
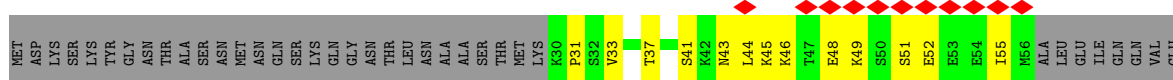
• Molecule 15: Dynein light chain tetex-type 1 protein



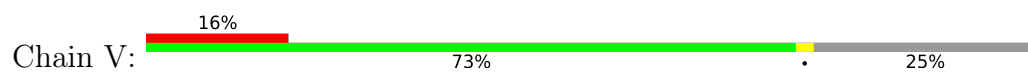
• Molecule 16: Thioredoxin



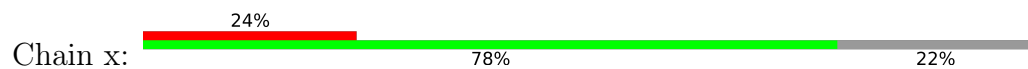
• Molecule 17: Calmodulin



• Molecule 18: Docking complex 1/2 protein



• Molecule 18: Docking complex 1/2 protein



4 Experimental information

Property	Value	Source
EM reconstruction method	SUBTOMOGRAM AVERAGING	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of subtomograms used	590	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING ONLY	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	80.0	Depositor
Minimum defocus (nm)	4000	Depositor
Maximum defocus (nm)	5000	Depositor
Magnification	Not provided	
Image detector	GATAN K2 QUANTUM (4k x 4k)	Depositor
Maximum map value	0.383	Depositor
Minimum map value	-0.252	Depositor
Average map value	0.003	Depositor
Map value standard deviation	0.053	Depositor
Recommended contour level	0.07	Depositor
Map size (\AA)	629.0, 629.0, 629.0	wwPDB
Map dimensions	74, 74, 74	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	8.5, 8.5, 8.5	Depositor

5 Model quality i

5.1 Standard geometry i

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

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	0.31	0/18167	0.63	1/25169 (0.0%)
2	B	0.79	100/25709 (0.4%)	0.77	68/35300 (0.2%)
3	C	0.70	156/25227 (0.6%)	0.68	68/34687 (0.2%)
4	d	0.32	0/3710	0.51	0/5026
5	e	0.30	0/4021	0.55	6/5463 (0.1%)
6	F	0.29	0/793	0.51	0/1070
7	G	0.27	0/751	0.52	0/1014
8	H	0.28	0/718	0.47	0/965
9	I	0.28	0/705	0.51	0/954
10	J	0.29	0/723	0.45	0/966
11	K	0.29	0/828	0.50	0/1114
12	L	0.29	0/790	0.50	0/1063
13	M	0.27	0/743	0.45	0/996
14	N	0.32	0/915	0.55	0/1229
15	O	0.28	0/891	0.47	0/1209
16	P	2.95	64/866 (7.4%)	2.22	36/1171 (3.1%)
17	T	0.27	0/1070	0.44	0/1436
All	All	0.67	320/86627 (0.4%)	0.70	179/118832 (0.2%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	1
2	B	0	2
3	C	0	5
All	All	0	8

All (320) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1075	TRP	C-O	16.60	1.54	1.23
3	C	3345	LYS	C-O	-12.11	1.00	1.23
3	C	3331	GLY	CA-C	10.79	1.69	1.51
16	P	41	GLU	CD-OE1	10.22	1.36	1.25
2	B	1255	GLU	CD-OE2	10.08	1.36	1.25
16	P	62	GLU	CD-OE1	9.86	1.36	1.25
2	B	77	GLN	N-CA	9.57	1.65	1.46
2	B	1232	GLU	CG-CD	9.35	1.66	1.51
16	P	66	GLU	CD-OE1	9.21	1.35	1.25
2	B	1261	TYR	CG-CD2	9.21	1.51	1.39
16	P	32	TRP	CD2-CE2	9.09	1.52	1.41
3	C	3217	SER	CA-CB	-9.08	1.39	1.52
2	B	1261	TYR	CE1-CZ	8.81	1.50	1.38
2	B	1367	GLU	CD-OE2	8.73	1.35	1.25
16	P	71	SER	CB-OG	8.69	1.53	1.42
3	C	3325	ALA	CA-CB	8.54	1.70	1.52
2	B	1224	ARG	CZ-NH1	8.51	1.44	1.33
3	C	3281	LEU	N-CA	8.45	1.63	1.46
3	C	3274	ASP	N-CA	8.44	1.63	1.46
2	B	1250	GLU	CD-OE1	8.44	1.34	1.25
16	P	70	GLU	CD-OE1	-8.24	1.16	1.25
3	C	3238	ASP	N-CA	8.18	1.62	1.46
2	B	1235	SER	CB-OG	8.15	1.52	1.42
3	C	3336	ALA	N-CA	8.15	1.62	1.46
3	C	3308	PRO	CA-CB	8.15	1.69	1.53
3	C	3355	GLN	C-N	8.09	1.52	1.34
2	B	1330	TRP	CD2-CE2	-8.08	1.31	1.41
16	P	63	GLU	CD-OE2	8.00	1.34	1.25
3	C	3343	HIS	N-CA	7.99	1.62	1.46
16	P	44	GLU	CD-OE1	7.92	1.34	1.25
3	C	3286	PHE	N-CA	-7.89	1.30	1.46
2	B	1312	TRP	CG-CD1	7.89	1.47	1.36
3	C	3332	ILE	N-CA	7.83	1.62	1.46
3	C	3230	LEU	N-CA	-7.83	1.30	1.46
3	C	3337	PHE	N-CA	-7.82	1.30	1.46
3	C	3209	GLN	N-CA	-7.80	1.30	1.46
16	P	14	PHE	CG-CD1	7.75	1.50	1.38
3	C	3312	GLN	C-O	7.75	1.38	1.23
16	P	101	TRP	NE1-CE2	-7.73	1.27	1.37
3	C	3335	TRP	CA-CB	-7.70	1.37	1.53
16	P	23	TYR	CE2-CZ	-7.70	1.28	1.38
3	C	3228	LYS	C-O	7.70	1.38	1.23
2	B	1355	GLU	CD-OE1	-7.69	1.17	1.25

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	3208	ALA	CA-CB	7.69	1.68	1.52
3	C	3330	ALA	CA-CB	7.68	1.68	1.52
3	C	3281	LEU	C-O	7.66	1.37	1.23
3	C	3212	VAL	CA-CB	7.62	1.70	1.54
16	P	23	TYR	CG-CD1	-7.58	1.29	1.39
3	C	3322	ALA	N-CA	-7.55	1.31	1.46
16	P	5	TYR	CG-CD1	7.48	1.48	1.39
3	C	3205	LEU	N-CA	-7.45	1.31	1.46
2	B	1275	GLU	CG-CD	7.42	1.63	1.51
3	C	3313	SER	C-O	7.39	1.37	1.23
3	C	3229	PRO	CA-C	-7.38	1.38	1.52
16	P	19	GLU	CG-CD	-7.35	1.41	1.51
3	C	3210	GLU	N-CA	7.35	1.61	1.46
3	C	3334	LYS	CA-CB	7.35	1.70	1.53
3	C	3248	LEU	C-O	7.34	1.37	1.23
2	B	1330	TRP	CG-CD1	-7.32	1.26	1.36
3	C	3306	LEU	N-CA	7.30	1.60	1.46
16	P	5	TYR	CE2-CZ	7.28	1.48	1.38
3	C	3215	ILE	CA-CB	7.28	1.71	1.54
3	C	3220	ILE	N-CA	7.24	1.60	1.46
3	C	3224	LYS	C-O	7.23	1.37	1.23
3	C	3283	ASP	C-O	-7.22	1.09	1.23
3	C	3219	ASP	CA-CB	-7.18	1.38	1.53
3	C	3309	TYR	CA-CB	-7.15	1.38	1.53
3	C	3248	LEU	CA-CB	-7.14	1.37	1.53
3	C	3291	LYS	CA-CB	7.13	1.69	1.53
3	C	3296	ASP	C-O	7.13	1.36	1.23
2	B	1277	ARG	CZ-NH1	-7.05	1.23	1.33
3	C	3244	PHE	C-O	-7.04	1.09	1.23
2	B	1325	TRP	CD2-CE3	-7.03	1.29	1.40
3	C	3207	ARG	CA-CB	-7.03	1.38	1.53
3	C	3236	ILE	CA-CB	7.02	1.71	1.54
3	C	3296	ASP	N-CA	6.99	1.60	1.46
3	C	3305	LEU	CA-CB	-6.96	1.37	1.53
3	C	3328	ALA	CA-CB	-6.94	1.37	1.52
3	C	3275	GLU	N-CA	-6.94	1.32	1.46
16	P	32	TRP	CZ3-CH2	6.92	1.51	1.40
16	P	28	PHE	CG-CD2	6.90	1.49	1.38
3	C	3235	TYR	CA-CB	-6.89	1.38	1.53
3	C	3290	LEU	N-CA	-6.89	1.32	1.46
2	B	1245	PRO	CA-CB	6.88	1.67	1.53
3	C	3277	GLY	N-CA	6.88	1.56	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1289	GLU	CD-OE2	-6.88	1.18	1.25
3	C	3225	ALA	C-N	-6.87	1.18	1.34
3	C	3304	GLU	C-N	-6.86	1.18	1.34
3	C	3237	MET	N-CA	-6.85	1.32	1.46
16	P	44	GLU	CD-OE2	6.84	1.33	1.25
3	C	3216	GLU	N-CA	-6.84	1.32	1.46
3	C	3280	THR	CA-C	6.82	1.70	1.52
2	B	1239	GLU	CD-OE2	-6.82	1.18	1.25
3	C	3247	ARG	C-O	6.82	1.36	1.23
3	C	3240	VAL	CA-CB	6.81	1.69	1.54
3	C	3317	PHE	C-O	-6.81	1.10	1.23
3	C	3272	SER	C-N	-6.81	1.18	1.34
3	C	3207	ARG	C-N	6.79	1.49	1.34
3	C	3304	GLU	CA-CB	6.78	1.68	1.53
3	C	3310	LEU	N-CA	6.76	1.59	1.46
2	B	1268	TYR	CG-CD1	6.74	1.48	1.39
3	C	3235	TYR	C-N	6.74	1.49	1.34
2	B	1325	TRP	NE1-CE2	-6.74	1.28	1.37
3	C	3290	LEU	C-O	-6.72	1.10	1.23
3	C	3322	ALA	C-O	-6.72	1.10	1.23
3	C	3273	TYR	CA-C	6.71	1.70	1.52
2	B	1312	TRP	CD2-CE3	6.71	1.50	1.40
3	C	3234	LYS	C-N	-6.69	1.18	1.34
16	P	17	ILE	N-CA	6.69	1.59	1.46
3	C	3216	GLU	C-N	-6.68	1.18	1.34
3	C	3244	PHE	N-CA	-6.68	1.32	1.46
3	C	3218	LYS	CA-CB	6.68	1.68	1.53
3	C	3303	ILE	C-N	6.68	1.49	1.34
2	B	1229	PHE	CG-CD2	6.67	1.48	1.38
3	C	3226	ASN	CA-CB	-6.64	1.35	1.53
3	C	3334	LYS	C-N	-6.64	1.18	1.34
3	C	3299	ASN	N-CA	6.63	1.59	1.46
2	B	1237	ARG	NE-CZ	-6.60	1.24	1.33
2	B	1254	TYR	CD1-CE1	-6.60	1.29	1.39
3	C	3307	GLU	C-N	6.59	1.46	1.34
2	B	1362	TYR	CE1-CZ	-6.58	1.29	1.38
3	C	3324	LYS	C-N	6.58	1.49	1.34
3	C	3214	SER	CA-CB	-6.57	1.43	1.52
3	C	3307	GLU	N-CA	-6.57	1.33	1.46
16	P	36	CYS	CB-SG	-6.54	1.71	1.82
3	C	3208	ALA	CA-C	-6.54	1.35	1.52
2	B	1254	TYR	CB-CG	-6.53	1.41	1.51

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1254	TYR	CG-CD2	6.51	1.47	1.39
16	P	60	ILE	C-O	6.50	1.35	1.23
3	C	3234	LYS	N-CA	6.50	1.59	1.46
16	P	58	VAL	N-CA	6.49	1.59	1.46
2	B	1330	TRP	CZ3-CH2	-6.49	1.29	1.40
16	P	90	LYS	CA-CB	6.47	1.68	1.53
16	P	91	GLN	CG-CD	6.46	1.66	1.51
3	C	3282	GLY	N-CA	-6.44	1.36	1.46
3	C	3279	GLN	CA-CB	6.44	1.68	1.53
3	C	3227	LYS	C-N	-6.43	1.19	1.34
3	C	3285	ASN	CA-C	-6.42	1.36	1.52
16	P	80	VAL	CA-CB	6.41	1.68	1.54
2	B	1254	TYR	CE1-CZ	6.40	1.46	1.38
2	B	1254	TYR	CD2-CE2	-6.40	1.29	1.39
2	B	1217	GLU	CD-OE1	6.39	1.32	1.25
3	C	3335	TRP	CA-C	6.39	1.69	1.52
2	B	1366	VAL	CB-CG1	6.39	1.66	1.52
3	C	3220	ILE	C-O	6.38	1.35	1.23
3	C	3239	ALA	CA-CB	-6.38	1.39	1.52
16	P	14	PHE	CE2-CZ	6.35	1.49	1.37
2	B	1255	GLU	CB-CG	6.34	1.64	1.52
16	P	91	GLN	CA-CB	6.34	1.67	1.53
16	P	92	PHE	CA-CB	6.33	1.67	1.53
3	C	3321	PHE	CA-C	-6.33	1.36	1.52
3	C	3330	ALA	N-CA	-6.32	1.33	1.46
3	C	3292	GLU	CA-CB	-6.31	1.40	1.53
3	C	3311	ASN	C-N	-6.30	1.19	1.34
2	B	1267	TYR	CD2-CE2	-6.30	1.29	1.39
16	P	34	GLY	N-CA	-6.27	1.36	1.46
3	C	3286	PHE	C-O	-6.27	1.11	1.23
2	B	1330	TRP	C-O	6.25	1.35	1.23
2	B	1267	TYR	CB-CG	-6.25	1.42	1.51
3	C	3237	MET	CA-C	6.24	1.69	1.52
2	B	1267	TYR	CD1-CE1	-6.23	1.29	1.39
3	C	3314	GLU	C-O	6.23	1.35	1.23
16	P	30	ALA	C-O	6.21	1.35	1.23
2	B	1268	TYR	CE2-CZ	6.19	1.46	1.38
3	C	3214	SER	N-CA	6.19	1.58	1.46
3	C	3345	LYS	N-CA	-6.18	1.33	1.46
2	B	1357	ARG	CZ-NH2	-6.17	1.25	1.33
3	C	3336	ALA	CA-C	-6.17	1.36	1.52
3	C	3218	LYS	C-N	-6.16	1.19	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	3227	LYS	C-O	6.15	1.35	1.23
2	B	1268	TYR	CE1-CZ	-6.13	1.30	1.38
2	B	1285	GLU	CD-OE2	-6.13	1.19	1.25
3	C	3339	ILE	CA-CB	-6.12	1.40	1.54
3	C	3300	GLU	N-CA	-6.09	1.34	1.46
16	P	22	GLU	CG-CD	6.08	1.61	1.51
2	B	1259	ASN	CB-CG	6.08	1.65	1.51
2	B	1362	TYR	CG-CD2	-6.07	1.31	1.39
3	C	3227	LYS	N-CA	6.06	1.58	1.46
3	C	3214	SER	C-N	6.06	1.48	1.34
2	B	1325	TRP	CD1-NE1	6.05	1.48	1.38
16	P	38	ILE	C-O	6.04	1.34	1.23
3	C	3342	TYR	CA-C	6.02	1.68	1.52
2	B	1368	LYS	CA-CB	6.01	1.67	1.53
2	B	1363	ASN	CB-CG	6.00	1.64	1.51
16	P	101	TRP	CD2-CE3	-5.98	1.31	1.40
3	C	3294	GLU	N-CA	-5.97	1.34	1.46
3	C	3221	VAL	N-CA	-5.97	1.34	1.46
16	P	28	PHE	CE1-CZ	5.97	1.48	1.37
2	B	1332	GLN	CG-CD	5.97	1.64	1.51
2	B	1234	GLU	CG-CD	-5.96	1.43	1.51
3	C	3204	ALA	CA-C	-5.96	1.37	1.52
2	B	1340	ASP	CB-CG	-5.96	1.39	1.51
2	B	1312	TRP	NE1-CE2	5.94	1.45	1.37
16	P	24	VAL	CA-CB	5.94	1.67	1.54
2	B	1252	MET	CA-CB	5.91	1.67	1.53
16	P	15	GLU	CA-CB	5.90	1.67	1.53
16	P	44	GLU	CB-CG	5.89	1.63	1.52
2	B	1370	LYS	N-CA	5.88	1.58	1.46
3	C	3223	LEU	C-O	5.88	1.34	1.23
2	B	1330	TRP	N-CA	5.87	1.58	1.46
2	B	1295	TYR	CB-CG	-5.86	1.42	1.51
2	B	1268	TYR	CG-CD2	-5.85	1.31	1.39
3	C	3333	LEU	C-O	5.84	1.34	1.23
3	C	3338	ALA	CA-CB	5.83	1.64	1.52
2	B	1252	MET	CG-SD	5.83	1.96	1.81
3	C	3219	ASP	CA-C	5.83	1.68	1.52
2	B	1297	GLN	N-CA	5.82	1.57	1.46
3	C	3312	GLN	CA-CB	-5.77	1.41	1.53
3	C	3274	ASP	C-O	5.76	1.34	1.23
3	C	3295	LYS	CA-C	5.75	1.68	1.52
3	C	3311	ASN	C-O	5.74	1.34	1.23

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1316	ALA	CA-CB	5.74	1.64	1.52
2	B	1366	VAL	N-CA	5.74	1.57	1.46
3	C	3209	GLN	C-O	-5.72	1.12	1.23
3	C	3339	ILE	N-CA	5.71	1.57	1.46
16	P	6	ILE	N-CA	5.69	1.57	1.46
3	C	3305	LEU	CA-C	5.67	1.67	1.52
2	B	1302	MET	N-CA	5.67	1.57	1.46
3	C	3245	LYS	N-CA	5.67	1.57	1.46
2	B	1295	TYR	CD2-CE2	-5.67	1.30	1.39
2	B	1325	TRP	CZ2-CH2	-5.67	1.26	1.37
3	C	3215	ILE	CA-C	-5.66	1.38	1.52
3	C	3309	TYR	CA-C	5.66	1.67	1.52
3	C	3333	LEU	C-N	5.65	1.47	1.34
3	C	3340	TYR	C-N	5.64	1.47	1.34
3	C	3289	LYS	CA-C	-5.63	1.38	1.52
2	B	1281	TYR	CD1-CE1	-5.63	1.30	1.39
2	B	1295	TYR	CD1-CE1	-5.62	1.30	1.39
16	P	21	ASN	N-CA	5.62	1.57	1.46
16	P	79	HIS	CA-CB	5.61	1.66	1.53
2	B	1329	PRO	CA-C	5.61	1.64	1.52
2	B	1362	TYR	CZ-OH	5.60	1.47	1.37
2	B	1358	ASN	CB-CG	5.59	1.64	1.51
3	C	3282	GLY	C-O	5.59	1.32	1.23
2	B	1229	PHE	CE1-CZ	5.57	1.48	1.37
2	B	1353	PRO	N-CD	5.57	1.55	1.47
16	P	81	PHE	CA-CB	5.55	1.66	1.53
16	P	26	VAL	CA-CB	5.54	1.66	1.54
3	C	3242	VAL	N-CA	5.54	1.57	1.46
3	C	3201	ALA	CA-CB	-5.53	1.40	1.52
3	C	3341	GLU	CA-CB	5.51	1.66	1.53
16	P	8	ILE	N-CA	5.50	1.57	1.46
16	P	29	PHE	CB-CG	-5.50	1.42	1.51
16	P	16	ASP	CA-C	5.50	1.67	1.52
2	B	1368	LYS	CE-NZ	5.50	1.62	1.49
2	B	1268	TYR	CB-CG	5.49	1.59	1.51
16	P	71	SER	CA-CB	-5.49	1.44	1.52
2	B	1254	TYR	CA-CB	5.47	1.66	1.53
3	C	3276	SER	CA-CB	5.46	1.61	1.52
16	P	102	GLU	CG-CD	-5.44	1.43	1.51
3	C	3211	ALA	C-N	5.43	1.46	1.34
3	C	3246	ALA	C-N	5.43	1.46	1.34
2	B	1274	ILE	N-CA	5.43	1.57	1.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1213	PRO	C-O	5.42	1.34	1.23
16	P	43	PHE	CA-CB	5.41	1.65	1.53
16	P	45	PRO	N-CA	5.40	1.56	1.47
3	C	3223	LEU	CA-CB	-5.40	1.41	1.53
2	B	1236	PHE	CG-CD1	-5.39	1.30	1.38
3	C	3310	LEU	C-O	-5.39	1.13	1.23
16	P	63	GLU	CB-CG	5.38	1.62	1.52
3	C	3279	GLN	C-N	-5.38	1.21	1.34
2	B	1251	SER	CA-CB	5.38	1.61	1.52
2	B	1342	ASN	N-CA	-5.37	1.35	1.46
3	C	3209	GLN	CA-C	5.36	1.66	1.52
2	B	1281	TYR	CB-CG	-5.35	1.43	1.51
3	C	3306	LEU	CA-C	-5.33	1.39	1.52
3	C	3226	ASN	CA-C	5.33	1.66	1.52
16	P	25	LEU	CA-CB	5.32	1.66	1.53
16	P	58	VAL	CB-CG2	5.31	1.64	1.52
2	B	1244	LEU	N-CA	-5.31	1.35	1.46
3	C	3290	LEU	CA-CB	5.31	1.66	1.53
3	C	3320	THR	CA-CB	-5.28	1.39	1.53
3	C	3298	ILE	CA-C	5.28	1.66	1.52
16	P	37	LYS	N-CA	-5.27	1.35	1.46
3	C	3230	LEU	CA-CB	5.27	1.65	1.53
3	C	3217	SER	C-O	5.26	1.33	1.23
3	C	3294	GLU	C-N	-5.26	1.22	1.34
3	C	3214	SER	C-O	5.26	1.33	1.23
3	C	3354	ILE	C-O	-5.25	1.13	1.23
2	B	1299	LYS	N-CA	5.24	1.56	1.46
2	B	1254	TYR	CZ-OH	-5.23	1.28	1.37
2	B	1332	GLN	CA-CB	5.23	1.65	1.53
3	C	3320	THR	N-CA	5.23	1.56	1.46
2	B	1250	GLU	C-N	5.22	1.46	1.34
16	P	50	HIS	C-O	5.21	1.33	1.23
2	B	1365	ILE	N-CA	-5.21	1.35	1.46
16	P	32	TRP	CG-CD1	5.21	1.44	1.36
3	C	3341	GLU	N-CA	-5.19	1.35	1.46
3	C	3243	PHE	CA-C	-5.17	1.39	1.52
3	C	3274	ASP	CA-C	-5.16	1.39	1.52
16	P	107	SER	CA-CB	-5.16	1.45	1.52
16	P	86	LYS	CB-CG	5.16	1.66	1.52
3	C	3308	PRO	C-N	-5.15	1.22	1.34
16	P	23	TYR	CA-CB	5.15	1.65	1.53
2	B	1309	LYS	CE-NZ	5.14	1.61	1.49

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1253	GLY	C-N	5.14	1.45	1.34
2	B	1360	LYS	CE-NZ	5.13	1.61	1.49
2	B	1242	GLN	CG-CD	5.12	1.62	1.51
2	B	1309	LYS	CA-CB	5.12	1.65	1.53
16	P	58	VAL	CB-CG1	-5.11	1.42	1.52
16	P	32	TRP	CG-CD2	-5.10	1.34	1.43
2	B	1302	MET	C-O	5.09	1.33	1.23
2	B	1336	ASP	N-CA	5.09	1.56	1.46
2	B	1367	GLU	CG-CD	5.08	1.59	1.51
2	B	1250	GLU	CB-CG	-5.07	1.42	1.52
3	C	3205	LEU	C-O	-5.07	1.13	1.23
16	P	69	VAL	C-N	5.06	1.45	1.34
3	C	3336	ALA	C-O	5.05	1.32	1.23
3	C	3273	TYR	CA-CB	-5.05	1.42	1.53
3	C	3216	GLU	CA-CB	5.05	1.65	1.53
3	C	3278	ILE	C-O	5.04	1.32	1.23
2	B	1288	PHE	CA-CB	-5.04	1.42	1.53
2	B	1357	ARG	CZ-NH1	-5.04	1.26	1.33
16	P	63	GLU	CD-OE1	-5.03	1.20	1.25
2	B	1312	TRP	CZ2-CH2	5.02	1.46	1.37
16	P	70	GLU	CD-OE2	5.02	1.31	1.25
3	C	3305	LEU	C-N	5.01	1.45	1.34
2	B	1281	TYR	N-CA	5.01	1.56	1.46
16	P	86	LYS	N-CA	5.01	1.56	1.46
2	B	1294	ASN	C-N	5.01	1.45	1.34

All (179) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	3344	GLN	CA-C-N	-13.69	87.09	117.20
2	B	1224	ARG	NE-CZ-NH2	-12.33	114.14	120.30
2	B	1268	TYR	CB-CG-CD1	11.37	127.82	121.00
3	C	3345	LYS	N-CA-C	-11.25	80.62	111.00
16	P	14	PHE	CB-CG-CD2	-10.80	113.24	120.80
2	B	1254	TYR	CB-CG-CD1	-10.51	114.69	121.00
3	C	3355	GLN	C-N-CA	-10.39	95.72	121.70
2	B	1261	TYR	CB-CG-CD1	-9.97	115.02	121.00
2	B	1325	TRP	CE2-CD2-CG	9.81	115.15	107.30
2	B	1330	TRP	CA-CB-CG	9.76	132.24	113.70
2	B	1075	TRP	O-C-N	-9.62	107.31	122.70
2	B	1325	TRP	CD1-CG-CD2	-9.39	98.79	106.30
2	B	1229	PHE	CB-CG-CD2	9.28	127.30	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
5	e	822	LEU	CB-CG-CD1	-9.23	95.30	111.00
2	B	956	LEU	CA-CB-CG	-9.21	94.12	115.30
2	B	4432	PRO	N-CA-CB	8.77	113.83	103.30
2	B	1304	ASP	CB-CG-OD2	8.73	126.16	118.30
16	P	101	TRP	CD1-CG-CD2	-8.36	99.61	106.30
3	C	3345	LYS	CA-C-O	-8.30	102.67	120.10
16	P	32	TRP	CD1-NE1-CE2	-8.26	101.57	109.00
3	C	3345	LYS	CA-C-N	8.23	135.30	117.20
2	B	1320	PHE	CB-CG-CD1	-8.19	115.07	120.80
16	P	16	ASP	CB-CG-OD1	-8.13	110.98	118.30
2	B	1313	ASP	CB-CG-OD2	8.04	125.53	118.30
2	B	1268	TYR	CG-CD1-CE1	8.02	127.72	121.30
2	B	1362	TYR	CB-CG-CD1	8.02	125.81	121.00
16	P	5	TYR	CB-CG-CD2	-7.99	116.20	121.00
2	B	1322	TYR	CB-CG-CD1	7.92	125.75	121.00
2	B	1261	TYR	CG-CD1-CE1	-7.91	114.97	121.30
2	B	1237	ARG	NE-CZ-NH2	-7.68	116.46	120.30
16	P	98	ASP	CB-CG-OD1	7.62	125.16	118.30
16	P	32	TRP	CH2-CZ2-CE2	-7.52	109.88	117.40
2	B	164	LEU	CA-CB-CG	7.50	132.54	115.30
2	B	1268	TYR	CZ-CE2-CD2	7.44	126.50	119.80
16	P	61	ASP	CB-CG-OD2	7.41	124.97	118.30
2	B	1254	TYR	CG-CD1-CE1	-7.35	115.42	121.30
3	C	3297	SER	N-CA-CB	-7.32	99.52	110.50
3	C	3378	ALA	O-C-N	-7.29	111.03	122.70
2	B	1261	TYR	CZ-CE2-CD2	-7.29	113.24	119.80
3	C	3354	ILE	CA-C-O	-7.23	104.92	120.10
16	P	32	TRP	CG-CD1-NE1	7.22	117.32	110.10
3	C	3314	GLU	N-CA-CB	-7.21	97.62	110.60
5	e	822	LEU	CA-CB-CG	7.15	131.74	115.30
2	B	1362	TYR	CG-CD1-CE1	7.10	126.98	121.30
3	C	3295	LYS	N-CA-CB	-7.02	97.96	110.60
2	B	1229	PHE	CB-CG-CD1	-7.01	115.89	120.80
16	P	14	PHE	CB-CG-CD1	6.99	125.69	120.80
16	P	14	PHE	CG-CD2-CE2	-6.92	113.18	120.80
16	P	43	PHE	CB-CG-CD2	6.91	125.64	120.80
3	C	3328	ALA	CB-CA-C	-6.91	99.74	110.10
3	C	3213	ASP	O-C-N	-6.88	111.68	122.70
3	C	3312	GLN	N-CA-CB	-6.87	98.24	110.60
3	C	3354	ILE	N-CA-C	-6.82	92.59	111.00
2	B	1254	TYR	CZ-CE2-CD2	-6.80	113.68	119.80
2	B	1300	ASP	CB-CG-OD1	-6.79	112.19	118.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	3211	ALA	CB-CA-C	-6.71	100.04	110.10
3	C	4188	PRO	N-CA-CB	6.69	111.33	103.30
3	C	3281	LEU	C-N-CA	-6.65	108.33	122.30
3	C	4182	PRO	N-CA-CB	6.63	111.25	103.30
2	B	1325	TRP	CE3-CZ3-CH2	6.57	128.43	121.20
16	P	64	ASP	CB-CG-OD2	-6.55	112.41	118.30
3	C	3354	ILE	CA-C-N	6.41	131.30	117.20
2	B	1248	TYR	CB-CG-CD2	-6.37	117.18	121.00
2	B	1277	ARG	NE-CZ-NH2	6.36	123.48	120.30
3	C	3378	ALA	CA-C-N	6.36	131.19	117.20
3	C	3292	GLU	CB-CA-C	-6.33	97.73	110.40
2	B	1336	ASP	CB-CG-OD1	-6.33	112.61	118.30
3	C	2978	PRO	N-CA-CB	6.33	110.89	103.30
2	B	1300	ASP	CB-CG-OD2	6.31	123.98	118.30
16	P	14	PHE	CD1-CE1-CZ	-6.31	112.52	120.10
2	B	1268	TYR	CB-CG-CD2	-6.31	117.21	121.00
2	B	1237	ARG	NH1-CZ-NH2	6.29	126.31	119.40
2	B	4008	PRO	N-CA-CB	6.25	110.80	103.30
5	e	81	PRO	N-CA-CB	6.24	110.79	103.30
2	B	3703	PRO	N-CA-CB	6.24	110.79	103.30
3	C	4180	PRO	N-CA-CB	6.23	110.78	103.30
2	B	1364	VAL	CA-CB-CG1	6.20	120.20	110.90
3	C	3319	ASP	O-C-N	-6.19	112.79	122.70
3	C	4546	PRO	N-CA-CB	6.19	110.72	103.30
3	C	2979	PRO	N-CA-CB	6.18	110.72	103.30
2	B	1254	TYR	CD1-CG-CD2	6.15	124.66	117.90
2	B	1237	ARG	NE-CZ-NH1	-6.14	117.23	120.30
16	P	32	TRP	CG-CD2-CE3	-6.14	128.37	133.90
16	P	61	ASP	CB-CG-OD1	-6.14	112.77	118.30
16	P	32	TRP	NE1-CE2-CZ2	-6.11	123.68	130.40
3	C	3204	ALA	CB-CA-C	-6.04	101.05	110.10
3	C	3338	ALA	CB-CA-C	5.96	119.05	110.10
5	e	106	PRO	N-CA-CB	5.95	110.44	103.30
2	B	1325	TRP	CD2-CE2-CZ2	5.91	129.40	122.30
16	P	5	TYR	CG-CD2-CE2	-5.90	116.58	121.30
16	P	101	TRP	CE2-CD2-CG	5.89	112.01	107.30
16	P	32	TRP	CD1-CG-CD2	-5.88	101.60	106.30
2	B	1312	TRP	CE2-CD2-CG	-5.87	102.60	107.30
3	C	3244	PHE	C-N-CA	5.87	136.38	121.70
3	C	3284	MET	N-CA-CB	5.87	121.16	110.60
3	C	3287	MET	N-CA-CB	5.85	121.13	110.60
3	C	3272	SER	N-CA-CB	-5.82	101.77	110.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
16	P	101	TRP	CG-CD1-NE1	5.82	115.92	110.10
2	B	1652	PRO	N-CA-CB	5.79	110.25	103.30
3	C	3244	PHE	CA-C-N	5.77	129.90	117.20
3	C	3326	SER	N-CA-CB	-5.76	101.86	110.50
2	B	1248	TYR	CG-CD2-CE2	-5.75	116.70	121.30
3	C	3323	THR	N-CA-CB	5.75	121.22	110.30
16	P	32	TRP	CD2-CE3-CZ3	-5.74	111.34	118.80
5	e	1249	PRO	N-CA-CB	5.74	110.18	103.30
1	A	1185	PRO	N-CA-CB	5.72	110.16	103.30
3	C	3206	ARG	O-C-N	-5.65	113.66	122.70
2	B	1340	ASP	CB-CG-OD2	-5.64	113.23	118.30
3	C	2805	PRO	N-CA-CB	5.62	110.04	103.30
16	P	28	PHE	CB-CG-CD1	-5.62	116.87	120.80
5	e	1237	PRO	N-CA-CB	5.61	110.03	103.30
2	B	1362	TYR	CZ-CE2-CD2	5.59	124.83	119.80
16	P	23	TYR	CB-CG-CD2	5.58	124.35	121.00
2	B	1320	PHE	CG-CD1-CE1	-5.57	114.67	120.80
3	C	3203	PRO	CA-C-O	5.57	133.56	120.20
16	P	77	LEU	CB-CG-CD2	5.56	120.45	111.00
2	B	1229	PHE	CG-CD2-CE2	5.55	126.91	120.80
2	B	1325	TRP	NE1-CE2-CD2	-5.54	101.76	107.30
3	C	3331	GLY	O-C-N	-5.53	113.85	122.70
3	C	3483	PRO	N-CA-CB	5.53	109.94	103.30
3	C	3332	ILE	CB-CA-C	-5.52	100.56	111.60
3	C	3293	PHE	O-C-N	5.52	131.53	122.70
3	C	3307	GLU	N-CA-CB	-5.52	100.67	110.60
16	P	101	TRP	CG-CD2-CE3	-5.51	128.94	133.90
3	C	3237	MET	N-CA-CB	-5.49	100.71	110.60
3	C	3299	ASN	N-CA-CB	5.49	120.48	110.60
3	C	3209	GLN	O-C-N	-5.49	113.92	122.70
3	C	3217	SER	N-CA-CB	-5.49	102.27	110.50
16	P	5	TYR	CD1-CE1-CZ	-5.44	114.91	119.80
3	C	3311	ASN	CA-C-O	5.43	131.51	120.10
2	B	1249	THR	CA-CB-CG2	-5.42	104.82	112.40
3	C	3241	LEU	O-C-N	-5.41	114.05	122.70
2	B	1264	ILE	CG1-CB-CG2	-5.40	99.53	111.40
3	C	3325	ALA	N-CA-CB	5.39	117.65	110.10
3	C	3273	TYR	N-CA-CB	-5.39	100.89	110.60
3	C	3322	ALA	CA-C-N	5.39	129.06	117.20
3	C	3233	ILE	CB-CA-C	5.38	122.37	111.60
16	P	28	PHE	CB-CG-CD2	5.38	124.56	120.80
3	C	3275	GLU	N-CA-CB	-5.35	100.97	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	3340	TYR	O-C-N	5.33	131.23	122.70
3	C	3216	GLU	CA-C-O	5.32	131.28	120.10
2	B	1322	TYR	CG-CD1-CE1	5.32	125.56	121.30
16	P	9	THR	CA-CB-CG2	-5.32	104.95	112.40
2	B	1246	PHE	CB-CG-CD1	5.31	124.52	120.80
16	P	64	ASP	CB-CG-OD1	5.30	123.07	118.30
2	B	3951	PRO	N-CA-CB	5.30	109.66	103.30
3	C	3239	ALA	CB-CA-C	-5.29	102.16	110.10
3	C	3329	ALA	O-C-N	5.29	131.16	122.70
2	B	1240	PHE	CB-CG-CD1	5.28	124.50	120.80
2	B	1320	PHE	CZ-CE2-CD2	-5.28	113.77	120.10
16	P	101	TRP	CH2-CZ2-CE2	-5.28	112.12	117.40
2	B	1164	MET	CB-CG-SD	-5.27	96.58	112.40
2	B	1229	PHE	CD1-CE1-CZ	5.27	126.43	120.10
2	B	1288	PHE	CB-CG-CD2	5.27	124.49	120.80
16	P	5	TYR	CD1-CG-CD2	5.27	123.69	117.90
2	B	1224	ARG	NH1-CZ-NH2	5.25	125.18	119.40
3	C	3229	PRO	O-C-N	5.25	131.09	122.70
16	P	11	THR	CA-CB-CG2	-5.24	105.06	112.40
3	C	3222	GLU	CB-CA-C	5.24	120.88	110.40
3	C	3276	SER	CB-CA-C	5.24	120.05	110.10
2	B	1245	PRO	N-CD-CG	5.19	110.99	103.20
2	B	1317	LEU	CB-CG-CD2	5.19	119.83	111.00
2	B	1261	TYR	CB-CG-CD2	5.19	124.11	121.00
3	C	3317	PHE	C-N-CA	5.17	134.64	121.70
3	C	3289	LYS	N-CA-CB	5.17	119.91	110.60
2	B	1369	VAL	O-C-N	-5.13	114.50	122.70
3	C	3313	SER	CA-C-N	-5.10	105.98	117.20
3	C	3227	LYS	CA-C-O	5.10	130.80	120.10
3	C	3230	LEU	CB-CA-C	5.09	119.88	110.20
16	P	89	VAL	CA-CB-CG1	5.09	118.54	110.90
2	B	1362	TYR	CD1-CG-CD2	-5.08	112.31	117.90
2	B	1232	GLU	OE1-CD-OE2	-5.07	117.21	123.30
16	P	98	ASP	CB-CG-OD2	-5.06	113.75	118.30
3	C	3355	GLN	CB-CA-C	5.05	120.50	110.40
16	P	78	PRO	N-CA-CB	5.04	109.35	103.30
2	B	1312	TRP	NE1-CE2-CD2	5.04	112.34	107.30
2	B	2557	PRO	N-CA-CB	5.04	109.34	103.30
3	C	3281	LEU	CB-CA-C	-5.04	100.63	110.20
2	B	1236	PHE	CB-CG-CD1	-5.00	117.30	120.80

There are no chirality outliers.

All (8) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	282	ARG	Peptide
2	B	1075	TRP	Mainchain
2	B	966	LYS	Peptide
3	C	3201	ALA	Mainchain
3	C	3344	GLN	Mainchain
3	C	3354	ILE	Mainchain
3	C	3378	ALA	Mainchain
3	C	974	GLN	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	18127	0	9379	311	0
2	B	25545	0	17415	935	0
3	C	25046	0	16443	674	0
4	d	3626	0	3455	0	0
5	e	3948	0	3485	0	0
6	F	781	0	791	46	0
7	G	744	0	771	42	0
8	H	702	0	686	50	0
9	I	694	0	684	44	0
10	J	702	0	671	18	0
11	K	803	0	766	67	0
12	L	773	0	806	51	0
13	M	726	0	726	29	0
14	N	897	0	911	70	0
15	O	878	0	868	36	0
16	P	847	0	836	76	0
17	T	1057	0	1033	35	0
18	V	490	0	102	5	0
18	x	505	0	105	0	0
19	C	81	0	36	0	0
20	C	31	0	12	0	0
All	All	87003	0	59981	2356	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 20.

All (2356) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1212:ILE:CG2	2:B:1213:PRO:HD3	1.22	1.64
2:B:814:TYR:CA	2:B:1075:TRP:CZ2	1.79	1.58
2:B:814:TYR:HB2	2:B:1075:TRP:CE2	1.39	1.56
2:B:1148:SER:CB	2:B:1214:LEU:HB2	1.35	1.56
2:B:1148:SER:H	2:B:1214:LEU:CD1	1.01	1.55
2:B:1212:ILE:CG2	2:B:1213:PRO:CD	1.88	1.51
2:B:814:TYR:HA	2:B:1075:TRP:CZ2	0.99	1.50
2:B:814:TYR:CB	2:B:1075:TRP:CE2	1.91	1.50
2:B:814:TYR:CA	2:B:1075:TRP:CE2	1.99	1.45
2:B:1148:SER:OG	2:B:1214:LEU:CB	1.75	1.34
3:C:3354:ILE:C	3:C:3358:ILE:H	1.25	1.34
2:B:1212:ILE:HG22	2:B:1213:PRO:CG	1.58	1.33
3:C:3343:HIS:HA	3:C:3346:SER:CB	1.58	1.32
2:B:813:ASP:OD2	2:B:1076:LEU:CD1	1.78	1.31
3:C:3194:ALA:HB2	3:C:3352:LYS:O	1.35	1.27
2:B:1136:ASP:OD2	2:B:1221:ASN:ND2	1.65	1.27
2:B:814:TYR:HB2	2:B:1075:TRP:CD2	1.20	1.24
2:B:814:TYR:N	2:B:1075:TRP:NE1	1.86	1.23
3:C:3187:ILE:CB	3:C:3360:GLU:N	2.03	1.21
3:C:3343:HIS:C	3:C:3346:SER:H	1.44	1.21
3:C:3343:HIS:CA	3:C:3346:SER:H	1.55	1.19
2:B:898:PRO:HG2	2:B:1074:SER:OG	1.43	1.19
2:B:813:ASP:OD2	2:B:1076:LEU:HD12	1.43	1.19
2:B:1212:ILE:HG23	2:B:1213:PRO:CD	1.60	1.18
1:A:357:ILE:HG21	1:A:379:LYS:C	1.64	1.17
2:B:1148:SER:N	2:B:1214:LEU:HD13	0.84	1.17
2:B:1148:SER:CB	2:B:1214:LEU:CB	2.20	1.16
2:B:1147:ILE:N	2:B:1214:LEU:HD11	1.63	1.11
1:A:357:ILE:CG2	1:A:379:LYS:O	1.99	1.10
3:C:3354:ILE:C	3:C:3358:ILE:N	2.06	1.08
2:B:813:ASP:OD2	2:B:1076:LEU:HD11	1.47	1.07
2:B:1148:SER:OG	2:B:1214:LEU:HB2	0.90	1.07
3:C:3354:ILE:O	3:C:3358:ILE:N	1.88	1.06
2:B:898:PRO:HG2	2:B:1074:SER:CB	1.87	1.05
2:B:814:TYR:N	2:B:1075:TRP:CE2	2.22	1.04
1:A:357:ILE:CG2	1:A:379:LYS:C	2.23	1.04
2:B:814:TYR:HA	2:B:1075:TRP:CH2	1.93	1.03
3:C:3194:ALA:HB1	3:C:3353:ARG:HA	1.38	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:3194:ALA:CB	3:C:3353:ARG:HA	1.87	1.03
2:B:1148:SER:HB2	2:B:1214:LEU:HB2	1.39	1.03
2:B:2379:GLU:CB	3:C:1536:LEU:HA	1.89	1.02
3:C:3342:TYR:O	3:C:3346:SER:N	1.93	1.02
2:B:1148:SER:HB2	2:B:1214:LEU:CB	1.86	1.01
2:B:1212:ILE:HG22	2:B:1213:PRO:CD	1.73	1.01
3:C:3354:ILE:O	3:C:3357:ALA:N	1.93	1.01
2:B:1147:ILE:C	2:B:1214:LEU:HD13	1.81	1.00
3:C:3343:HIS:C	3:C:3346:SER:N	2.14	1.00
1:A:357:ILE:HG21	1:A:379:LYS:CA	1.58	0.99
2:B:814:TYR:CG	2:B:1075:TRP:CH2	2.16	0.99
2:B:814:TYR:CB	2:B:1075:TRP:CZ2	2.30	0.98
2:B:1212:ILE:HG22	2:B:1213:PRO:HG3	1.46	0.98
2:B:814:TYR:CB	2:B:1075:TRP:CD2	2.07	0.97
3:C:175:GLU:O	3:C:177:ARG:NH1	1.98	0.97
2:B:1148:SER:OG	2:B:1213:PRO:C	2.02	0.96
2:B:1214:LEU:HG	2:B:1215:GLN:HG3	1.47	0.96
2:B:814:TYR:HB2	2:B:1075:TRP:CG	2.00	0.96
3:C:3192:GLU:N	3:C:3356:VAL:CB	1.71	0.95
1:A:222:PHE:HB2	2:B:952:PRO:HB3	1.49	0.94
2:B:814:TYR:N	2:B:1075:TRP:HE1	1.60	0.94
2:B:1343:LYS:HA	2:B:1369:VAL:HG13	1.48	0.94
3:C:3194:ALA:CB	3:C:3352:LYS:O	2.14	0.94
2:B:1359:PHE:HB2	2:B:1362:TYR:HD2	1.32	0.94
3:C:3180:CYS:HA	3:C:3366:ALA:HB1	1.50	0.93
3:C:3344:GLN:H	3:C:3347:LYS:H	1.15	0.93
3:C:928:LYS:HD2	3:C:957:ARG:HH22	1.34	0.92
3:C:3344:GLN:C	3:C:3348:ILE:H	1.73	0.92
2:B:1147:ILE:H	2:B:1214:LEU:HD11	1.26	0.92
2:B:94:LEU:HD13	3:C:124:THR:HG23	1.49	0.91
2:B:1147:ILE:N	2:B:1214:LEU:CD1	2.33	0.91
3:C:3194:ALA:HB1	3:C:3353:ARG:CA	2.01	0.91
2:B:1243:LYS:HG3	2:B:1264:ILE:HG12	1.51	0.91
2:B:2379:GLU:CB	3:C:1536:LEU:CB	2.48	0.90
13:M:49:ASP:HB2	13:M:53:TRP:HE1	1.37	0.89
2:B:1283:ASN:HA	2:B:1286:LYS:HD2	1.54	0.89
3:C:3343:HIS:CA	3:C:3346:SER:N	2.36	0.89
2:B:1317:LEU:HB3	16:P:32:TRP:HH2	1.35	0.89
1:A:60:LEU:HD11	1:A:67:CYS:HB3	1.53	0.88
6:F:67:LEU:HD11	7:G:95:GLU:HB3	1.55	0.88
1:A:220:TRP:HE1	2:B:956:LEU:HD13	1.37	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1317:LEU:HD13	16:P:77:LEU:HB2	1.55	0.88
3:C:535:ASN:HA	3:C:548:LEU:HD23	1.56	0.87
2:B:435:GLN:HG3	2:B:533:ARG:HG3	1.55	0.87
2:B:1148:SER:N	2:B:1214:LEU:CD1	1.81	0.87
2:B:1359:PHE:HB2	2:B:1362:TYR:CD2	2.09	0.87
2:B:2379:GLU:CB	3:C:1536:LEU:CA	2.52	0.86
3:C:667:LYS:HA	3:C:671:GLN:HB2	1.58	0.86
3:C:3378:ALA:O	3:C:3380:ILE:N	2.09	0.85
2:B:483:LYS:HD3	2:B:484:LYS:HD3	1.56	0.85
3:C:633:GLU:HA	3:C:636:ARG:HD3	1.58	0.85
14:N:32:SER:HA	14:N:35:GLN:HB3	1.58	0.85
11:K:33:ALA:HA	14:N:36:LYS:HA	1.58	0.85
2:B:1135:HIS:CG	2:B:1217:GLU:OE2	2.18	0.85
1:A:357:ILE:HG21	1:A:379:LYS:O	1.65	0.85
2:B:1148:SER:HB2	2:B:1214:LEU:HD22	1.57	0.85
11:K:37:LEU:HD13	14:N:36:LYS:HZ3	1.42	0.85
1:A:342:ALA:HB3	1:A:346:LEU:HD21	1.56	0.85
3:C:3344:GLN:N	3:C:3347:LYS:H	1.73	0.84
2:B:1245:PRO:HA	2:B:1360:LYS:HB2	1.59	0.84
3:C:3190:GLU:CB	3:C:3355:GLN:C	2.46	0.84
3:C:3194:ALA:HB2	3:C:3352:LYS:C	1.98	0.84
11:K:36:ILE:HG22	11:K:96:ILE:HD11	1.59	0.84
3:C:862:LEU:HD13	3:C:972:TRP:HE1	1.40	0.84
2:B:157:TYR:HA	2:B:178:SER:HB2	1.60	0.84
3:C:3343:HIS:HA	3:C:3346:SER:CA	2.08	0.84
3:C:3344:GLN:N	3:C:3346:SER:N	2.25	0.83
11:K:34:ASP:HB3	14:N:40:GLU:HB2	1.59	0.83
2:B:1346:GLY:HA3	2:B:1369:VAL:HG11	1.59	0.83
3:C:89:GLN:HA	3:C:126:ASN:HD21	1.40	0.83
2:B:477:ILE:HG13	2:B:481:ALA:HA	1.61	0.83
2:B:1148:SER:OG	2:B:1214:LEU:CA	2.26	0.82
2:B:1176:VAL:HG13	2:B:1188:GLN:HG2	1.61	0.82
2:B:4318:LEU:O	2:B:4322:GLU:N	2.12	0.82
2:B:175:PRO:HG2	2:B:210:VAL:HG12	1.60	0.82
2:B:902:ILE:HA	2:B:915:PRO:HG2	1.60	0.82
3:C:242:GLU:HG3	3:C:368:LYS:HE3	1.58	0.82
1:A:282:ARG:O	1:A:284:ASN:N	2.11	0.82
3:C:3190:GLU:CB	3:C:3355:GLN:O	2.28	0.82
3:C:3202:LEU:O	3:C:3204:ALA:N	2.13	0.82
1:A:220:TRP:NE1	2:B:956:LEU:HD13	1.94	0.82
2:B:1148:SER:HB2	2:B:1214:LEU:CD2	2.09	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2229:LYS:O	2:B:2230:THR:N	2.13	0.82
3:C:3187:ILE:CB	3:C:3359:ALA:O	0.82	0.81
3:C:456:ARG:HA	3:C:459:LYS:HD2	1.62	0.81
1:A:357:ILE:HG22	1:A:379:LYS:O	1.79	0.81
2:B:1212:ILE:CB	2:B:1213:PRO:CD	2.39	0.81
2:B:898:PRO:HG2	2:B:1074:SER:HB3	1.62	0.81
2:B:898:PRO:CG	2:B:1074:SER:OG	2.28	0.80
3:C:3194:ALA:CB	3:C:3352:LYS:C	2.50	0.80
2:B:1317:LEU:HB3	16:P:32:TRP:CH2	2.16	0.80
2:B:509:GLN:HA	2:B:512:ASP:HB2	1.62	0.80
11:K:34:ASP:HB2	14:N:36:LYS:C	2.02	0.80
3:C:1071:ILE:HG13	3:C:1074:MET:HB2	1.64	0.80
1:A:2611:LYS:O	1:A:2613:THR:N	2.15	0.80
1:A:250:LYS:HD3	1:A:251:TRP:HB2	1.62	0.79
2:B:1146:VAL:CG1	2:B:1215:GLN:CD	2.50	0.79
2:B:4032:GLY:O	2:B:4036:GLY:N	2.15	0.79
16:P:37:LYS:O	16:P:95:ASN:ND2	2.15	0.79
1:A:4124:TYR:N	1:A:4146:MET:O	2.15	0.79
2:B:94:LEU:HD11	2:B:109:VAL:HG23	1.64	0.79
2:B:814:TYR:HA	2:B:1075:TRP:HZ2	0.99	0.79
1:A:4048:THR:O	1:A:4110:ALA:N	2.16	0.79
2:B:3830:PHE:O	2:B:3839:ASP:N	2.16	0.78
3:C:3194:ALA:CB	3:C:3353:ARG:CA	2.60	0.78
3:C:31:SER:O	3:C:37:ASN:ND2	2.14	0.78
3:C:269:LYS:HD2	3:C:281:GLN:HA	1.66	0.78
1:A:5:LEU:HB2	1:A:352:LEU:HD11	1.64	0.78
3:C:502:LEU:HB2	3:C:509:LYS:HD2	1.64	0.78
2:B:1147:ILE:H	2:B:1214:LEU:CD1	1.94	0.78
15:O:22:LYS:HD2	15:O:26:GLY:HA3	1.64	0.78
1:A:256:ILE:HD11	1:A:322:GLU:HB2	1.66	0.78
1:A:2631:ALA:O	1:A:2635:LYS:N	2.16	0.78
3:C:3202:LEU:O	3:C:3205:LEU:N	2.16	0.78
11:K:30:PRO:HD2	14:N:33:LYS:HB2	1.65	0.78
2:B:112:GLU:O	2:B:120:HIS:NE2	2.16	0.78
2:B:137:LEU:HB3	2:B:142:TRP:HD1	1.49	0.78
3:C:60:GLN:HB3	3:C:62:GLN:HE22	1.47	0.78
3:C:381:ILE:O	3:C:396:MET:N	2.17	0.77
3:C:3344:GLN:O	3:C:3348:ILE:N	2.18	0.77
3:C:101:PRO:HG2	3:C:104:ASP:HB3	1.67	0.77
2:B:1148:SER:OG	2:B:1213:PRO:O	2.02	0.77
2:B:1360:LYS:O	2:B:1364:VAL:HB	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:708:TYR:HE1	2:B:756:ARG:HB3	1.51	0.76
2:B:1340:ASP:OD2	2:B:1343:LYS:HB3	1.86	0.76
2:B:3546:ARG:O	2:B:3550:GLY:N	2.19	0.76
2:B:3552:ASN:O	2:B:3553:LEU:N	2.18	0.76
1:A:6:VAL:HB	1:A:353:ASN:HB3	1.68	0.76
2:B:1178:ILE:HA	2:B:1181:LYS:HE2	1.66	0.76
2:B:841:LYS:HA	2:B:844:LEU:HD12	1.66	0.76
1:A:344:ASN:HD21	2:B:969:LEU:HB3	1.50	0.76
2:B:2201:TYR:O	2:B:2205:GLY:N	2.19	0.76
2:B:1148:SER:HG	2:B:1214:LEU:HB2	1.46	0.76
3:C:477:ASN:HD22	3:C:528:LEU:HD23	1.49	0.76
2:B:1107:ARG:HD3	2:B:1190:ILE:HG12	1.67	0.76
2:B:459:ILE:HG23	2:B:499:LEU:HD22	1.68	0.76
2:B:1120:THR:OG1	2:B:1157:ARG:NH1	2.19	0.76
2:B:794:LEU:HD21	2:B:867:VAL:HA	1.68	0.75
2:B:1146:VAL:HG13	2:B:1215:GLN:HG3	1.68	0.75
3:C:542:ILE:HD13	3:C:576:TYR:HA	1.68	0.75
2:B:215:PRO:HA	2:B:218:LEU:HD12	1.67	0.75
1:A:22:SER:OG	1:A:321:ARG:NH1	2.20	0.75
3:C:973:ASP:HB3	3:C:981:ASP:HB3	1.69	0.75
3:C:3187:ILE:CB	3:C:3359:ALA:C	0.85	0.75
3:C:3342:TYR:O	3:C:3346:SER:CA	2.34	0.75
2:B:67:GLN:H	2:B:85:LYS:HZ3	1.33	0.75
16:P:36:CYS:HB2	16:P:95:ASN:HD21	1.51	0.75
1:A:221:SER:HB2	1:A:226:TYR:HE1	1.52	0.74
3:C:3344:GLN:CA	3:C:3347:LYS:H	2.00	0.74
3:C:1146:GLN:HB3	3:C:1187:TRP:CH2	2.22	0.74
2:B:373:THR:HA	2:B:376:ALA:HB3	1.70	0.74
3:C:1105:ARG:NH2	3:C:1176:GLU:OE2	2.19	0.74
3:C:3343:HIS:HA	3:C:3346:SER:H	1.50	0.74
3:C:3354:ILE:HA	3:C:3357:ALA:HB3	1.70	0.74
14:N:102:LEU:HD23	15:O:90:ASP:O	1.88	0.74
2:B:1146:VAL:HG13	2:B:1215:GLN:CG	2.18	0.74
2:B:814:TYR:CG	2:B:1075:TRP:CZ2	2.61	0.74
1:A:332:GLU:O	1:A:334:ARG:NH1	2.21	0.74
2:B:1148:SER:CA	2:B:1214:LEU:HD13	2.09	0.74
1:A:2297:GLY:N	1:A:2375:PHE:O	2.21	0.73
3:C:948:LEU:HA	3:C:951:ILE:HD12	1.68	0.73
2:B:2228:THR:O	2:B:2231:LYS:N	2.21	0.73
3:C:1141:GLN:HA	3:C:1144:LYS:HD2	1.70	0.73
1:A:2496:MET:O	1:A:2500:ALA:N	2.20	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1148:SER:H	2:B:1214:LEU:CG	1.96	0.73
2:B:1240:PHE:O	2:B:1244:LEU:HB2	1.88	0.73
2:B:2396:MET:N	2:B:2447:PRO:O	2.22	0.73
3:C:801:ILE:HD13	3:C:868:LEU:HD21	1.69	0.73
2:B:1148:SER:HB2	2:B:1214:LEU:CG	2.17	0.73
2:B:1136:ASP:CG	2:B:1221:ASN:HD21	1.91	0.73
3:C:859:VAL:HA	3:C:975:GLN:HE22	1.53	0.73
12:L:87:THR:OG1	13:M:54:ASN:ND2	2.19	0.73
2:B:802:ILE:HG12	2:B:877:THR:HG21	1.69	0.73
2:B:1148:SER:OG	2:B:1214:LEU:N	2.22	0.73
2:B:1568:SER:O	2:B:1572:ALA:N	2.21	0.73
2:B:1136:ASP:CG	2:B:1221:ASN:ND2	2.40	0.73
2:B:1219:THR:HA	2:B:1222:ILE:HD12	1.71	0.73
9:I:89:VAL:HG21	9:I:94:LEU:HB2	1.69	0.73
1:A:4004:LEU:O	1:A:4008:CYS:N	2.21	0.72
3:C:880:PRO:HB2	3:C:883:THR:HB	1.71	0.72
7:G:136:MET:O	7:G:146:ILE:HA	1.89	0.72
2:B:301:LYS:HE3	2:B:320:ILE:HG21	1.70	0.72
2:B:924:LEU:HD12	2:B:926:VAL:H	1.53	0.72
2:B:1149:ASP:OD1	2:B:1214:LEU:CD2	2.37	0.72
3:C:210:GLU:OE1	3:C:277:ASN:ND2	2.23	0.72
2:B:548:LEU:HD21	2:B:613:ILE:HD13	1.71	0.72
2:B:1285:GLU:HG3	2:B:1290:LEU:HD12	1.70	0.72
3:C:895:TYR:HA	3:C:898:LEU:HD12	1.72	0.72
9:I:51:ALA:H	9:I:54:LEU:HD23	1.54	0.72
3:C:14:LYS:HG3	3:C:24:LYS:HE3	1.70	0.72
3:C:971:ASN:ND2	3:C:986:TYR:OH	2.23	0.72
1:A:343:ASN:HD21	2:B:931:ARG:HE	1.38	0.72
2:B:64:VAL:HG13	2:B:86:LYS:HD3	1.72	0.72
2:B:1650:ALA:N	2:B:1653:ALA:O	2.22	0.72
2:B:2221:ASP:O	2:B:2225:GLY:N	2.23	0.72
3:C:3344:GLN:HA	3:C:3347:LYS:CB	2.19	0.72
11:K:20:THR:O	14:N:75:LYS:NZ	2.22	0.72
1:A:1954:SER:O	1:A:1957:SER:N	2.22	0.72
2:B:1360:LYS:HD2	2:B:1363:ASN:HB3	1.71	0.71
3:C:534:ASN:HA	3:C:537:ASN:HB2	1.70	0.71
3:C:3194:ALA:HB3	3:C:3353:ARG:HA	1.70	0.71
16:P:28:PHE:CZ	16:P:74:VAL:HG21	2.25	0.71
1:A:2627:LYS:O	1:A:2631:ALA:N	2.23	0.71
2:B:62:LEU:O	2:B:77:GLN:NE2	2.24	0.71
2:B:1271:LEU:HD21	2:B:1301:CYS:HB2	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:3180:CYS:HA	3:C:3366:ALA:CB	2.20	0.71
14:N:41:LEU:HD11	14:N:70:LYS:HG3	1.73	0.71
3:C:3187:ILE:O	3:C:3356:VAL:O	2.07	0.71
6:F:14:LEU:HA	6:F:17:LEU:HD23	1.71	0.71
2:B:64:VAL:HA	2:B:83:LYS:HZ1	1.55	0.71
1:A:322:GLU:HG3	1:A:340:GLY:HA3	1.71	0.71
2:B:734:GLU:HB2	2:B:737:VAL:HG22	1.73	0.71
2:B:1315:ILE:HD13	2:B:1318:ILE:HD12	1.70	0.71
7:G:76:TYR:H	7:G:89:ALA:HB3	1.56	0.70
1:A:22:SER:HB3	1:A:340:GLY:HA2	1.72	0.70
2:B:1136:ASP:OD2	2:B:1218:GLU:OE1	1.80	0.70
3:C:853:VAL:O	3:C:857:ARG:HD3	1.90	0.70
3:C:3343:HIS:C	3:C:3345:LYS:N	2.44	0.70
2:B:117:LEU:HD13	3:C:146:ILE:HG13	1.71	0.70
2:B:3848:ASP:O	2:B:3853:CYS:N	2.25	0.70
1:A:3895:MET:O	1:A:3899:THR:N	2.24	0.70
2:B:173:MET:HE1	2:B:218:LEU:HD23	1.72	0.70
3:C:3194:ALA:HB1	3:C:3353:ARG:N	2.06	0.70
1:A:319:ARG:HB2	1:A:322:GLU:OE2	1.91	0.70
1:A:1400:ALA:N	1:A:1524:ARG:O	2.22	0.70
2:B:1048:ASP:OD1	2:B:1173:LYS:NZ	2.25	0.70
2:B:1249:THR:OG1	2:B:1259:ASN:ND2	2.24	0.70
2:B:2209:GLU:N	2:B:2258:HIS:O	2.25	0.70
2:B:208:LYS:HB3	2:B:212:LYS:HE2	1.73	0.70
2:B:1147:ILE:CA	2:B:1214:LEU:CD1	2.70	0.70
2:B:1301:CYS:SG	2:B:1302:MET:N	2.65	0.70
2:B:422:ARG:HD3	2:B:478:MET:HG3	1.74	0.69
2:B:1310:THR:O	16:P:76:SER:HB3	1.92	0.69
3:C:3343:HIS:HA	3:C:3346:SER:N	2.05	0.69
2:B:1277:ARG:HH12	2:B:1280:GLU:HB2	1.57	0.69
12:L:28:GLN:HG3	12:L:32:LYS:HE3	1.72	0.69
2:B:1150:VAL:HA	2:B:1153:VAL:HG12	1.72	0.69
3:C:248:SER:O	3:C:252:LYS:HB2	1.92	0.69
1:A:124:PRO:HB3	1:A:185:PHE:HE2	1.57	0.69
1:A:3594:ARG:O	1:A:3621:TRP:N	2.26	0.69
1:A:208:MET:HG3	1:A:296:ILE:HD13	1.73	0.69
1:A:2044:TYR:O	1:A:2086:GLN:N	2.26	0.69
1:A:3519:LEU:O	1:A:3523:LEU:N	2.26	0.69
2:B:533:ARG:HE	2:B:535:ILE:HD11	1.57	0.69
2:B:3833:MET:O	2:B:3839:ASP:N	2.25	0.69
10:J:26:PHE:O	10:J:30:LYS:HG2	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:380:LEU:HD11	2:B:427:LEU:HB2	1.74	0.69
1:A:3384:SER:O	1:A:3388:ARG:N	2.26	0.69
2:B:493:ARG:NH2	2:B:500:GLU:OE2	2.26	0.69
3:C:784:VAL:O	3:C:788:LEU:HG	1.92	0.69
2:B:169:LYS:HZ1	3:C:150:LYS:HB2	1.59	0.68
2:B:1137:LYS:HB3	2:B:1215:GLN:NE2	2.08	0.68
2:B:1310:THR:HA	16:P:93:ILE:HG21	1.75	0.68
2:B:4123:ASP:O	2:B:4126:ILE:N	2.26	0.68
1:A:3221:SER:O	1:A:3225:ARG:N	2.25	0.68
2:B:20:GLN:HG2	3:C:16:THR:HG22	1.75	0.68
2:B:445:GLY:HA2	2:B:506:VAL:HG21	1.73	0.68
2:B:1070:PRO:HB3	2:B:1079:ASN:HA	1.74	0.68
2:B:420:LEU:O	2:B:424:GLN:HG2	1.93	0.68
3:C:177:ARG:HE	3:C:259:GLN:HA	1.59	0.68
3:C:871:LEU:HD22	3:C:875:VAL:HG23	1.75	0.68
2:B:536:ILE:HG22	2:B:540:LEU:HG	1.74	0.68
3:C:3192:GLU:H	3:C:3356:VAL:CB	2.01	0.68
6:F:20:ALA:HA	6:F:101:GLN:HA	1.74	0.68
12:L:26:MET:HB2	12:L:30:LEU:HD22	1.75	0.68
2:B:510:GLY:HA2	2:B:523:LEU:HD23	1.74	0.68
1:A:2893:LEU:O	1:A:2898:ARG:N	2.26	0.68
2:B:1229:PHE:O	2:B:1233:VAL:HG23	1.94	0.68
1:A:3470:LEU:O	1:A:3473:ILE:N	2.28	0.67
1:A:189:ARG:NH1	1:A:190:LEU:O	2.27	0.67
1:A:3:GLN:N	1:A:305:ASN:O	2.23	0.67
1:A:3835:GLU:O	1:A:3839:LYS:N	2.27	0.67
3:C:1065:ILE:HD13	3:C:1082:CYS:HB2	1.76	0.67
3:C:3741:ASN:O	3:C:3745:GLU:N	2.27	0.67
1:A:1931:LYS:O	1:A:1939:LYS:N	2.28	0.67
2:B:596:ARG:NH1	2:B:597:ASP:OD1	2.27	0.67
3:C:79:PHE:O	3:C:82:THR:OG1	2.11	0.67
3:C:3344:GLN:H	3:C:3347:LYS:N	1.90	0.67
1:A:329:ASP:O	1:A:334:ARG:NH1	2.27	0.67
2:B:1054:ILE:HD13	2:B:1057:LEU:HD12	1.77	0.67
2:B:1113:LEU:HD21	2:B:1160:ILE:HB	1.76	0.67
2:B:1226:LEU:HD11	2:B:1285:GLU:OE2	1.93	0.67
3:C:935:VAL:HG21	3:C:1076:LEU:HB2	1.75	0.67
2:B:439:LEU:HB3	2:B:533:ARG:HH11	1.59	0.67
2:B:1047:LEU:HD22	2:B:1106:PHE:HE2	1.60	0.67
2:B:1146:VAL:HG13	2:B:1215:GLN:CD	2.14	0.67
3:C:96:LEU:HB3	3:C:119:ILE:HB	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4441:ILE:N	2:B:4494:TYR:O	2.28	0.67
17:T:33:VAL:O	17:T:37:THR:HG23	1.94	0.67
1:A:3781:TYR:O	1:A:3785:GLU:N	2.26	0.67
3:C:57:TYR:HB2	3:C:91:LYS:HB2	1.77	0.67
3:C:531:PHE:HA	3:C:534:ASN:HB2	1.76	0.67
2:B:470:PHE:CE1	2:B:488:ASP:HB3	2.29	0.67
2:B:1047:LEU:HD22	2:B:1106:PHE:CE2	2.30	0.67
3:C:3353:ARG:O	3:C:3354:ILE:O	2.13	0.67
2:B:1149:ASP:H	2:B:1214:LEU:HD22	1.58	0.66
3:C:1112:THR:HG21	3:C:1179:ALA:HA	1.78	0.66
1:A:1484:GLU:O	1:A:1495:LEU:N	2.27	0.66
1:A:2495:ASP:O	1:A:2496:MET:N	2.29	0.66
9:I:73:PRO:O	9:I:109:LYS:NZ	2.27	0.66
9:I:99:TYR:HD2	9:I:103:LEU:HB2	1.61	0.66
2:B:1277:ARG:NH1	2:B:1280:GLU:HB2	2.10	0.66
2:B:1343:LYS:HA	2:B:1369:VAL:CG1	2.24	0.66
3:C:3187:ILE:C	3:C:3360:GLU:N	2.49	0.66
7:G:62:ASP:HB3	7:G:66:ARG:HH21	1.61	0.66
16:P:24:VAL:HG22	16:P:54:THR:HB	1.78	0.66
1:A:274:GLY:O	1:A:282:ARG:NH1	2.27	0.66
1:A:1592:ARG:O	1:A:1593:SER:N	2.29	0.66
2:B:2890:GLY:N	2:B:3022:PHE:O	2.29	0.66
15:O:51:ILE:O	15:O:55:ILE:HG12	1.96	0.66
2:B:1315:ILE:HG12	2:B:1362:TYR:HD1	1.61	0.66
3:C:621:ILE:HA	3:C:624:PHE:CD2	2.31	0.66
3:C:884:LYS:HG3	3:C:885:ARG:HD2	1.78	0.66
3:C:243:LEU:HD22	3:C:320:LEU:HD13	1.78	0.66
2:B:1212:ILE:HG23	2:B:1213:PRO:HD3	0.66	0.66
3:C:210:GLU:HG3	3:C:280:ASN:ND2	2.11	0.66
3:C:624:PHE:HB3	3:C:634:ILE:HG23	1.77	0.66
2:B:132:VAL:HG11	3:C:77:VAL:HG22	1.78	0.66
2:B:674:ASP:HB3	2:B:675:PRO:HD3	1.76	0.66
2:B:677:LEU:HD11	2:B:712:ILE:HD12	1.79	0.66
3:C:608:ILE:HD13	3:C:705:GLN:HG2	1.77	0.66
3:C:3353:ARG:O	3:C:3357:ALA:N	2.28	0.65
1:A:166:GLY:HA2	1:A:171:ARG:H	1.59	0.65
3:C:903:GLN:NE2	3:C:994:GLU:OE2	2.28	0.65
2:B:217:GLN:HA	2:B:220:LYS:HD3	1.77	0.65
3:C:336:ILE:O	3:C:340:PRO:HD2	1.97	0.65
2:B:572:MET:HG3	2:B:575:ASN:H	1.61	0.65
2:B:1283:ASN:CA	2:B:1286:LYS:HD2	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1804:PHE:O	2:B:1808:LYS:N	2.28	0.65
3:C:52:LYS:NZ	3:C:75:ASP:OD2	2.29	0.65
1:A:283:THR:HG21	2:B:939:ASN:HB3	1.78	0.65
2:B:2465:TRP:O	2:B:2469:ALA:N	2.30	0.65
11:K:30:PRO:O	14:N:32:SER:HB3	1.97	0.65
1:A:339:GLY:C	1:A:346:LEU:HB2	2.17	0.65
2:B:454:GLU:O	2:B:458:GLN:CB	2.45	0.65
2:B:716:ASP:HA	2:B:719:VAL:HG12	1.78	0.65
2:B:752:ILE:HD13	2:B:765:PHE:HB3	1.77	0.65
2:B:806:ASN:OD1	2:B:881:HIS:NE2	2.30	0.65
2:B:851:LYS:HD2	2:B:851:LYS:O	1.97	0.65
2:B:1107:ARG:HG3	2:B:1111:LYS:HE3	1.78	0.65
2:B:1317:LEU:HD22	16:P:32:TRP:HZ3	1.62	0.65
3:C:1182:LEU:HD12	3:C:1185:ARG:HE	1.62	0.65
3:C:2492:ILE:O	3:C:2634:MET:N	2.29	0.65
16:P:47:LYS:HD3	16:P:55:ILE:CG1	2.27	0.65
1:A:2374:SER:O	1:A:2378:GLY:N	2.29	0.65
2:B:663:LYS:HG2	2:B:664:ASP:H	1.61	0.65
2:B:1346:GLY:HA2	2:B:1349:ILE:HD12	1.78	0.65
3:C:601:PRO:HD2	3:C:701:CYS:SG	2.37	0.65
9:I:30:MET:HG3	9:I:35:LEU:HD22	1.78	0.65
2:B:652:SER:O	2:B:672:ASN:ND2	2.30	0.65
3:C:542:ILE:HG23	3:C:575:ASN:HB2	1.79	0.65
9:I:59:ALA:O	9:I:63:ILE:HG12	1.97	0.65
2:B:65:SER:HB2	2:B:87:LYS:H	1.62	0.65
2:B:530:LEU:HD21	2:B:536:ILE:HG21	1.77	0.65
2:B:1243:LYS:HE2	2:B:1264:ILE:HA	1.78	0.65
2:B:1802:GLU:O	2:B:1806:ILE:N	2.30	0.65
2:B:1176:VAL:O	2:B:1179:THR:OG1	2.12	0.64
3:C:696:ILE:HG23	3:C:700:LYS:HE2	1.79	0.64
2:B:688:LEU:O	2:B:691:ARG:NH1	2.30	0.64
3:C:313:ASN:HD21	3:C:355:PHE:HB3	1.62	0.64
3:C:942:VAL:HB	3:C:1017:LEU:HD11	1.80	0.64
7:G:103:ILE:HD13	7:G:106:LEU:HD12	1.79	0.64
2:B:1244:LEU:HB3	2:B:1245:PRO:HD3	1.78	0.64
17:T:43:ASN:HA	17:T:46:LYS:HE3	1.79	0.64
3:C:819:VAL:HG12	3:C:909:MET:HG2	1.78	0.64
6:F:75:GLU:OE2	7:G:131:LYS:NZ	2.31	0.64
2:B:1245:PRO:CA	2:B:1360:LYS:HB2	2.27	0.64
1:A:256:ILE:HG23	1:A:324:ALA:HB2	1.78	0.64
2:B:1243:LYS:HZ3	2:B:1264:ILE:HG23	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1283:ASN:O	2:B:1287:LEU:HG	1.98	0.64
2:B:1359:PHE:O	2:B:1363:ASN:N	2.31	0.64
3:C:3870:GLU:O	3:C:3874:TRP:N	2.31	0.64
2:B:345:ARG:HG3	2:B:414:VAL:HG12	1.79	0.64
2:B:656:LEU:HD22	2:B:756:ARG:HD2	1.78	0.64
2:B:2285:LEU:N	2:B:2293:ILE:O	2.30	0.64
3:C:77:VAL:HG11	3:C:94:TRP:HZ2	1.63	0.64
3:C:3354:ILE:CA	3:C:3358:ILE:N	2.61	0.64
11:K:111:GLN:OE1	11:K:111:GLN:N	2.30	0.64
16:P:60:ILE:HG23	16:P:69:VAL:HG21	1.80	0.64
2:B:165:LEU:HA	2:B:168:ILE:HB	1.78	0.64
16:P:6:ILE:O	16:P:57:LYS:N	2.26	0.64
2:B:1161:ILE:HG13	2:B:1197:PHE:CZ	2.33	0.63
3:C:2910:PHE:O	3:C:2914:GLY:N	2.31	0.63
3:C:3353:ARG:O	3:C:3357:ALA:CB	2.46	0.63
3:C:3354:ILE:O	3:C:3357:ALA:CA	2.45	0.63
1:A:222:PHE:O	1:A:223:THR:OG1	2.14	0.63
3:C:1026:LEU:HD13	3:C:1088:TRP:CG	2.33	0.63
10:J:67:ASN:HB2	11:K:58:GLN:HB2	1.80	0.63
13:M:5:PRO:HA	13:M:77:ILE:HG22	1.80	0.63
2:B:1748:ASP:O	2:B:1752:GLY:N	2.31	0.63
3:C:601:PRO:HG3	3:C:697:ARG:HD3	1.80	0.63
3:C:1227:ARG:HG3	3:C:1228:ARG:HH22	1.62	0.63
14:N:76:VAL:HB	14:N:79:TYR:HB2	1.79	0.63
2:B:658:GLN:NE2	2:B:746:GLU:OE1	2.32	0.63
3:C:546:LEU:HD12	3:C:549:LEU:HD23	1.79	0.63
1:A:220:TRP:HB2	1:A:253:LEU:HD13	1.81	0.63
2:B:161:VAL:O	2:B:164:LEU:HB3	1.98	0.63
1:A:2175:SER:O	1:A:2177:ILE:N	2.32	0.63
2:B:64:VAL:HG22	2:B:83:LYS:HZ2	1.63	0.63
3:C:862:LEU:HB2	3:C:972:TRP:CD1	2.33	0.63
12:L:21:ILE:HG12	12:L:31:LEU:HD21	1.80	0.63
1:A:42:ASP:HB2	1:A:48:ASP:HB3	1.80	0.63
2:B:66:GLY:HA2	2:B:86:LYS:HG2	1.81	0.63
2:B:1147:ILE:HB	2:B:1214:LEU:HD12	1.81	0.63
3:C:317:LEU:HD23	3:C:356:TYR:HD2	1.64	0.63
3:C:667:LYS:HD2	3:C:716:ILE:HD12	1.81	0.63
3:C:872:ASP:O	3:C:888:ARG:NH2	2.31	0.63
8:H:10:VAL:N	8:H:80:TYR:O	2.29	0.63
1:A:341:TRP:CE2	1:A:344:ASN:HA	2.34	0.63
2:B:92:ILE:HB	2:B:109:VAL:HB	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:156:ASN:HB2	2:B:180:LYS:HE2	1.81	0.63
2:B:228:LEU:O	2:B:232:GLU:HG2	1.98	0.63
1:A:223:THR:HA	2:B:956:LEU:HD11	1.81	0.63
1:A:1398:GLY:O	1:A:1524:ARG:N	2.32	0.63
2:B:55:GLN:O	2:B:93:LYS:NZ	2.25	0.63
2:B:425:ASP:OD1	2:B:426:ILE:N	2.32	0.62
8:H:9:PRO:HA	8:H:81:VAL:HA	1.80	0.62
2:B:801:ILE:HG21	2:B:874:ALA:HB1	1.79	0.62
3:C:3180:CYS:CA	3:C:3366:ALA:HB1	2.26	0.62
11:K:37:LEU:HD13	14:N:36:LYS:NZ	2.12	0.62
2:B:1318:ILE:HG12	2:B:1345:LEU:HD13	1.79	0.62
3:C:343:MET:HG2	3:C:422:CYS:HB2	1.80	0.62
3:C:618:THR:HA	3:C:621:ILE:HG12	1.81	0.62
16:P:26:VAL:O	16:P:80:VAL:HA	1.99	0.62
1:A:264:TRP:HB3	1:A:296:ILE:HD12	1.81	0.62
2:B:797:PHE:CE1	2:B:829:VAL:HA	2.34	0.62
3:C:56:TYR:OH	3:C:74:GLN:NE2	2.32	0.62
3:C:177:ARG:NH2	3:C:258:GLU:HB2	2.14	0.62
2:B:1365:ILE:O	2:B:1369:VAL:HG23	2.00	0.62
2:B:3590:LEU:O	2:B:3594:LEU:N	2.31	0.62
3:C:3344:GLN:CA	3:C:3347:LYS:N	2.62	0.62
8:H:40:GLU:OE1	8:H:40:GLU:N	2.32	0.62
9:I:99:TYR:CD2	9:I:103:LEU:HB2	2.35	0.62
2:B:196:PHE:O	2:B:200:ILE:HG12	2.00	0.62
2:B:507:ILE:HD11	2:B:536:ILE:HG23	1.80	0.62
2:B:701:ILE:HA	2:B:704:LYS:HD2	1.80	0.62
3:C:28:VAL:HG22	3:C:69:LYS:HD3	1.81	0.62
3:C:85:LEU:HG	3:C:87:LYS:H	1.63	0.62
3:C:805:ARG:HG3	3:C:806:ILE:HG13	1.81	0.62
2:B:439:LEU:HB3	2:B:533:ARG:NH1	2.15	0.62
2:B:565:GLY:HA2	2:B:571:SER:H	1.63	0.62
2:B:1284:LEU:HD23	2:B:1287:LEU:HD12	1.81	0.62
2:B:3516:PRO:O	2:B:3519:LEU:N	2.32	0.62
12:L:82:PHE:HB3	13:M:60:ASN:O	1.99	0.62
2:B:30:LYS:HA	2:B:33:LEU:HD23	1.81	0.62
2:B:1138:LYS:HG2	2:B:1145:LYS:O	2.00	0.62
2:B:1340:ASP:CG	2:B:1343:LYS:HB3	2.21	0.62
3:C:244:ILE:HG23	3:C:247:ARG:HH21	1.64	0.62
3:C:317:LEU:HA	3:C:352:ILE:HG23	1.80	0.62
1:A:345:TRP:CD1	2:B:970:ALA:HB1	2.34	0.62
11:K:32:CYS:SG	11:K:33:ALA:N	2.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:74:GLN:HB3	15:O:107:TYR:HB2	1.82	0.62
17:T:166:LYS:HE3	17:T:168:ASN:HD21	1.65	0.62
2:B:833:GLY:HA2	2:B:836:ILE:HG12	1.81	0.61
1:A:96:LEU:HD23	1:A:113:ILE:HG22	1.81	0.61
2:B:875:ILE:HB	2:B:962:PHE:CZ	2.35	0.61
2:B:2189:GLY:O	2:B:2193:VAL:N	2.31	0.61
2:B:677:LEU:HD11	2:B:712:ILE:CD1	2.30	0.61
2:B:1079:ASN:OD1	2:B:1080:LEU:N	2.33	0.61
3:C:952:GLN:HG2	3:C:1006:ILE:HD13	1.81	0.61
3:C:3344:GLN:N	3:C:3347:LYS:N	2.45	0.61
1:A:144:GLN:HE21	1:A:171:ARG:HH11	1.48	0.61
2:B:503:LEU:O	2:B:507:ILE:HG13	2.01	0.61
2:B:665:GLU:HB3	2:B:726:LYS:HG3	1.82	0.61
3:C:243:LEU:HB3	3:C:322:LYS:HD2	1.82	0.61
17:T:104:ALA:O	17:T:177:ARG:HD3	2.00	0.61
1:A:334:ARG:HD3	1:A:351:ALA:HB1	1.82	0.61
2:B:123:SER:O	2:B:127:GLU:HB2	2.01	0.61
8:H:16:MET:HB3	8:H:20:MET:HB2	1.82	0.61
8:H:77:ILE:HG12	8:H:79:LEU:HD22	1.82	0.61
2:B:454:GLU:O	2:B:458:GLN:HB2	2.00	0.61
2:B:1148:SER:CB	2:B:1214:LEU:CG	2.76	0.61
2:B:1311:MET:O	2:B:1314:ALA:HB3	2.00	0.61
2:B:1340:ASP:O	2:B:1344:THR:OG1	2.14	0.61
3:C:398:TRP:CD1	3:C:496:LYS:HB2	2.36	0.61
3:C:596:LEU:HD11	3:C:598:ARG:HE	1.65	0.61
3:C:3354:ILE:CB	3:C:3358:ILE:CB	2.79	0.61
3:C:3355:GLN:O	3:C:3359:ALA:CB	2.49	0.61
7:G:81:SER:N	7:G:142:GLU:O	2.33	0.61
3:C:562:LYS:HA	3:C:565:LEU:HB2	1.81	0.61
7:G:138:ALA:HB3	7:G:145:LEU:HB2	1.82	0.61
2:B:315:GLU:O	2:B:319:PRO:HD2	2.00	0.61
2:B:531:LEU:HD13	2:B:609:LEU:HB3	1.83	0.61
3:C:511:ASP:O	3:C:515:VAL:HG23	2.01	0.61
16:P:60:ILE:HA	16:P:65:LEU:HD22	1.83	0.61
1:A:5:LEU:H	1:A:306:LEU:HD22	1.66	0.61
2:B:422:ARG:HG2	2:B:477:ILE:HG23	1.83	0.61
2:B:439:LEU:HD22	2:B:530:LEU:HA	1.82	0.61
3:C:535:ASN:HB3	3:C:568:ARG:HH12	1.66	0.61
11:K:37:LEU:HB2	14:N:36:LYS:HD2	1.81	0.61
2:B:115:ASN:HD21	3:C:98:ILE:HG23	1.66	0.60
2:B:2904:THR:O	2:B:2908:GLY:N	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:82:LEU:HG	16:P:89:VAL:HB	1.83	0.60
1:A:3487:VAL:O	1:A:3491:LYS:N	2.33	0.60
3:C:3344:GLN:O	3:C:3348:ILE:CB	2.50	0.60
6:F:88:ILE:O	6:F:98:LEU:HA	2.01	0.60
11:K:29:PRO:HG2	14:N:30:TYR:H	1.65	0.60
2:B:26:LYS:H	2:B:29:ILE:HD12	1.67	0.60
2:B:161:VAL:HG13	2:B:164:LEU:HD13	1.83	0.60
2:B:433:ILE:HA	2:B:463:PHE:CZ	2.36	0.60
2:B:435:GLN:HA	2:B:438:LYS:HE2	1.83	0.60
2:B:1149:ASP:N	2:B:1214:LEU:HD22	2.15	0.60
1:A:124:PRO:HB3	1:A:185:PHE:CE2	2.34	0.60
3:C:405:LEU:HD21	3:C:464:PHE:HB3	1.83	0.60
6:F:76:VAL:HG22	6:F:90:THR:HG23	1.84	0.60
12:L:22:ARG:NH1	12:L:97:ASP:OD2	2.33	0.60
12:L:33:LYS:HD3	12:L:60:PHE:CZ	2.36	0.60
1:A:192:PRO:HA	1:A:239:TRP:HE1	1.65	0.60
1:A:1616:ALA:O	1:A:1620:LEU:N	2.32	0.60
1:A:1915:ALA:O	1:A:1919:SER:N	2.33	0.60
2:B:165:LEU:O	2:B:169:LYS:N	2.27	0.60
2:B:555:LEU:HD21	2:B:602:PRO:HG2	1.83	0.60
2:B:1328:LYS:HG2	2:B:1332:GLN:HE21	1.65	0.60
3:C:1081:ILE:O	3:C:1085:LEU:HG	2.01	0.60
6:F:9:ASP:OD1	6:F:10:GLN:N	2.34	0.60
1:A:1348:TYR:O	1:A:1355:LYS:N	2.34	0.60
2:B:473:VAL:HG23	2:B:488:ASP:OD1	2.02	0.60
3:C:678:HIS:HD2	3:C:686:VAL:HA	1.65	0.60
3:C:678:HIS:CD2	3:C:686:VAL:HA	2.36	0.60
1:A:3214:GLU:O	1:A:3218:ASN:N	2.35	0.60
2:B:1196:ASN:O	2:B:1200:ILE:HG12	2.02	0.60
8:H:14:SER:HA	8:H:77:ILE:HA	1.83	0.60
9:I:67:LEU:HB3	9:I:75:TRP:CD1	2.37	0.60
12:L:37:GLN:HE22	12:L:41:LEU:HD12	1.65	0.60
1:A:341:TRP:NE1	1:A:343:ASN:O	2.34	0.60
3:C:143:ILE:HG21	3:C:162:VAL:HG21	1.83	0.60
2:B:1106:PHE:HD2	2:B:1171:LEU:HB2	1.65	0.60
2:B:3393:ARG:O	2:B:3396:GLU:N	2.34	0.60
17:T:45:LYS:O	17:T:49:LYS:HG2	2.00	0.60
2:B:433:ILE:HA	2:B:463:PHE:HZ	1.67	0.60
2:B:1126:LYS:HZ2	2:B:1134:LEU:HD22	1.67	0.60
3:C:24:LYS:HZ1	3:C:29:GLU:HB2	1.67	0.60
7:G:126:LEU:O	7:G:137:VAL:HB	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:299:PHE:HD1	2:B:302:LEU:HD12	1.67	0.59
3:C:316:TYR:HB2	3:C:353:ALA:HB2	1.84	0.59
3:C:3353:ARG:O	3:C:3357:ALA:HB3	2.02	0.59
2:B:814:TYR:HB2	2:B:1075:TRP:NE1	2.07	0.59
3:C:3343:HIS:O	3:C:3345:LYS:N	2.34	0.59
2:B:429:LEU:O	2:B:433:ILE:HG13	2.01	0.59
2:B:1068:LYS:HD3	2:B:1069:THR:O	2.02	0.59
2:B:1240:PHE:HE1	2:B:1267:TYR:HB3	1.68	0.59
16:P:58:VAL:HG22	16:P:65:LEU:HD21	1.83	0.59
3:C:750:ASN:HB2	3:C:887:LYS:HD3	1.85	0.59
3:C:1039:SER:HB3	3:C:1103:ARG:NH2	2.18	0.59
14:N:108:ASP:OD1	14:N:130:TYR:N	2.28	0.59
1:A:200:ARG:HH22	1:A:228:ASN:ND2	2.01	0.59
1:A:288:VAL:HG12	1:A:290:ASP:H	1.66	0.59
1:A:3406:ARG:O	1:A:3688:ALA:N	2.33	0.59
2:B:359:VAL:HG21	2:B:419:PHE:HZ	1.68	0.59
2:B:1311:MET:SD	2:B:1356:ILE:HG13	2.43	0.59
3:C:321:GLU:HB2	3:C:345:ALA:HB1	1.82	0.59
3:C:3354:ILE:CA	3:C:3357:ALA:HB3	2.32	0.59
3:C:3194:ALA:HB1	3:C:3352:LYS:C	2.23	0.59
7:G:127:ARG:HG2	7:G:129:GLN:HE22	1.67	0.59
9:I:93:THR:HB	9:I:109:LYS:HB2	1.85	0.59
16:P:65:LEU:O	16:P:69:VAL:HG23	2.02	0.59
3:C:77:VAL:HG11	3:C:94:TRP:CZ2	2.38	0.59
3:C:812:THR:HA	3:C:815:LYS:HE3	1.85	0.59
3:C:970:TYR:CE1	3:C:977:LYS:HD2	2.38	0.59
3:C:3343:HIS:CA	3:C:3346:SER:CB	2.54	0.59
16:P:90:LYS:HD2	16:P:103:MET:HE3	1.84	0.59
3:C:577:ALA:HA	3:C:641:TYR:OH	2.03	0.59
3:C:755:HIS:CE1	3:C:794:LEU:HD13	2.37	0.59
1:A:144:GLN:HE21	1:A:171:ARG:NH1	2.01	0.59
1:A:320:PRO:HD2	1:A:341:TRP:O	2.03	0.59
1:A:3206:LYS:O	1:A:3210:ALA:N	2.33	0.59
2:B:203:TRP:HZ3	2:B:253:VAL:HG13	1.68	0.59
2:B:367:LEU:HD11	2:B:375:GLU:HB2	1.84	0.59
2:B:433:ILE:HG23	2:B:463:PHE:HE2	1.67	0.59
3:C:346:ILE:O	3:C:349:ILE:HG13	2.03	0.59
3:C:495:PHE:CE1	3:C:513:ASP:HB3	2.38	0.59
16:P:42:GLN:C	16:P:45:PRO:HD2	2.24	0.59
2:B:336:GLN:OE1	2:B:406:LYS:NZ	2.36	0.58
2:B:586:ALA:HB1	2:B:686:TYR:CZ	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1246:PHE:CG	2:B:1360:LYS:HB3	2.38	0.58
2:B:2657:LYS:O	2:B:2660:SER:N	2.36	0.58
3:C:1009:THR:HA	3:C:1012:LYS:HE2	1.85	0.58
3:C:3354:ILE:C	3:C:3358:ILE:CB	2.71	0.58
2:B:1660:ILE:O	2:B:1672:PHE:N	2.35	0.58
1:A:2628:GLN:O	1:A:2632:GLU:N	2.34	0.58
2:B:273:LYS:HB3	2:B:282:ARG:HH12	1.66	0.58
8:H:13:ASN:O	8:H:78:TYR:N	2.33	0.58
11:K:19:LYS:HG2	11:K:28:TRP:HB2	1.86	0.58
11:K:38:GLU:O	11:K:42:ARG:HG2	2.04	0.58
1:A:357:ILE:HG23	1:A:379:LYS:C	2.23	0.58
2:B:671:VAL:HG11	2:B:673:PHE:CE2	2.38	0.58
2:B:1218:GLU:O	2:B:1222:ILE:HG13	2.04	0.58
3:C:21:LEU:HD22	3:C:91:LYS:HG3	1.85	0.58
3:C:934:GLU:O	3:C:945:ASN:N	2.24	0.58
14:N:33:LYS:HD3	14:N:36:LYS:HG3	1.84	0.58
1:A:10:LEU:HG	1:A:65:ASN:HB3	1.86	0.58
1:A:38:GLY:O	1:A:53:PRO:HB3	2.04	0.58
1:A:2928:VAL:O	1:A:2932:SER:N	2.29	0.58
2:B:1175:ASN:O	2:B:1179:THR:HG23	2.03	0.58
7:G:71:LYS:HD3	7:G:72:THR:HG23	1.85	0.58
7:G:111:ARG:HA	7:G:114:VAL:HG12	1.84	0.58
7:G:136:MET:HB3	7:G:147:VAL:HG12	1.85	0.58
12:L:31:LEU:O	12:L:35:ILE:HG12	2.03	0.58
1:A:284:ASN:HA	2:B:935:ASN:HD21	1.68	0.58
1:A:3023:ARG:O	1:A:3027:LYS:N	2.37	0.58
2:B:1250:GLU:HA	2:B:1256:ASN:HB3	1.86	0.58
3:C:561:LEU:O	3:C:565:LEU:N	2.23	0.58
3:C:561:LEU:HG	3:C:565:LEU:HG	1.84	0.58
3:C:899:LEU:HD13	3:C:989:ILE:HD11	1.85	0.58
3:C:1095:GLN:O	3:C:1098:GLN:HG3	2.03	0.58
7:G:71:LYS:O	7:G:72:THR:OG1	2.21	0.58
1:A:3135:LEU:O	1:A:3139:VAL:N	2.35	0.58
2:B:64:VAL:O	2:B:74:TYR:HA	2.03	0.58
2:B:1224:ARG:O	2:B:1228:ILE:HG12	2.02	0.58
2:B:4547:VAL:O	2:B:4558:VAL:N	2.36	0.58
8:H:9:PRO:HG3	8:H:81:VAL:HG13	1.86	0.58
2:B:336:GLN:HG3	2:B:338:PRO:HG2	1.85	0.58
2:B:814:TYR:HB2	2:B:1075:TRP:CD1	2.36	0.58
2:B:1072:ASP:HB3	2:B:1077:ARG:HA	1.86	0.58
2:B:1215:GLN:HB3	2:B:1218:GLU:HB2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:933:VAL:HG21	3:C:944:LEU:HB3	1.86	0.58
3:C:2912:ASP:O	3:C:2918:LYS:N	2.37	0.58
6:F:34:LYS:HE3	6:F:36:HIS:CE1	2.39	0.58
8:H:16:MET:O	8:H:21:GLN:NE2	2.36	0.58
11:K:23:GLY:HA3	11:K:41:ILE:HG23	1.85	0.58
16:P:32:TRP:CH2	16:P:77:LEU:HG	2.38	0.58
1:A:225:GLN:HG3	1:A:282:ARG:HH11	1.69	0.58
2:B:429:LEU:HB2	2:B:470:PHE:CE2	2.39	0.58
2:B:2781:ASP:O	2:B:3047:TRP:N	2.37	0.58
3:C:1095:GLN:OE1	3:C:1098:GLN:NE2	2.37	0.58
3:C:3344:GLN:C	3:C:3345:LYS:O	2.23	0.58
2:B:55:GLN:HE21	2:B:57:ASN:HB3	1.68	0.57
2:B:503:LEU:HD11	2:B:533:ARG:HH21	1.68	0.57
2:B:1734:THR:O	2:B:1737:VAL:N	2.37	0.57
3:C:36:LYS:NZ	3:C:71:THR:O	2.29	0.57
3:C:3203:PRO:O	3:C:3204:ALA:HB2	2.04	0.57
1:A:1701:GLN:O	1:A:1705:ASN:N	2.35	0.57
2:B:134:GLN:HE21	3:C:79:PHE:HZ	1.51	0.57
3:C:210:GLU:HG3	3:C:280:ASN:HD21	1.69	0.57
3:C:580:LEU:HD22	3:C:641:TYR:CE1	2.39	0.57
1:A:51:ILE:HA	1:A:82:ARG:HG3	1.86	0.57
1:A:161:PHE:HD1	1:A:177:LEU:HB3	1.70	0.57
1:A:3615:CYS:O	1:A:3619:GLY:N	2.37	0.57
2:B:200:ILE:HG21	2:B:257:LEU:HD21	1.85	0.57
2:B:1354:LYS:HG2	2:B:1357:ARG:NH1	2.19	0.57
1:A:195:ASN:N	1:A:196:PRO:HD2	2.19	0.57
2:B:2376:SER:CB	3:C:1540:GLN:HA	2.34	0.57
3:C:104:ASP:OD2	3:C:107:LYS:HE3	2.05	0.57
16:P:47:LYS:HD3	16:P:55:ILE:HG12	1.86	0.57
2:B:422:ARG:NE	2:B:478:MET:HA	2.20	0.57
2:B:1315:ILE:HG23	2:B:1365:ILE:HG13	1.86	0.57
2:B:1325:TRP:HA	2:B:1328:LYS:HG3	1.86	0.57
12:L:96:PHE:CE2	12:L:105:ILE:HD11	2.39	0.57
16:P:11:THR:O	16:P:15:GLU:HG2	2.05	0.57
1:A:276:PHE:HE2	1:A:284:ASN:HB2	1.70	0.57
1:A:1400:ALA:O	1:A:1526:ILE:N	2.38	0.57
2:B:609:LEU:HD13	2:B:614:THR:HG23	1.86	0.57
2:B:810:SER:HB3	2:B:815:ASP:HA	1.87	0.57
2:B:1357:ARG:HG3	2:B:1358:ASN:OD1	2.05	0.57
2:B:653:GLN:HG3	2:B:655:LYS:H	1.69	0.57
2:B:1268:TYR:HB3	2:B:1305:LEU:HD21	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:529:GLN:HA	3:C:532:ILE:HD12	1.87	0.57
7:G:78:ILE:HG23	7:G:86:VAL:HB	1.87	0.57
11:K:41:ILE:O	11:K:45:GLN:NE2	2.37	0.57
1:A:99:GLY:HA3	1:A:149:HIS:HE1	1.69	0.57
1:A:225:GLN:HB2	1:A:251:TRP:CD1	2.40	0.57
2:B:956:LEU:O	2:B:960:ARG:HD3	2.05	0.57
3:C:1111:LEU:HB3	3:C:1183:LEU:HD21	1.87	0.57
3:C:1195:GLU:O	3:C:1199:LYS:HD3	2.04	0.57
3:C:3186:GLN:O	3:C:3359:ALA:CB	2.52	0.57
14:N:32:SER:O	14:N:36:LYS:HG2	2.05	0.57
1:A:69:TRP:O	1:A:70:ARG:NE	2.30	0.57
1:A:2417:PHE:N	1:A:2487:ALA:O	2.38	0.57
2:B:738:LYS:O	2:B:741:ILE:HG22	2.05	0.57
2:B:1107:ARG:NH1	2:B:1111:LYS:HB3	2.19	0.57
2:B:1117:ILE:HG22	2:B:1200:ILE:HG22	1.87	0.57
2:B:2818:LEU:N	2:B:2835:THR:O	2.38	0.57
3:C:972:TRP:HA	3:C:975:GLN:HE21	1.70	0.57
13:M:23:ILE:HG22	13:M:41:ILE:HG12	1.87	0.57
2:B:227:PRO:HD3	2:B:346:GLU:HB3	1.86	0.57
2:B:929:THR:HG22	2:B:930:ILE:H	1.68	0.57
3:C:1223:VAL:HG22	3:C:1259:LYS:HE2	1.87	0.57
9:I:38:ALA:O	9:I:42:ILE:HG13	2.04	0.57
1:A:203:HIS:HB3	1:A:219:GLY:HA3	1.87	0.56
2:B:1145:LYS:HZ1	2:B:1150:VAL:HG11	1.69	0.56
2:B:1225:ASP:HB3	2:B:1281:TYR:CZ	2.40	0.56
2:B:1250:GLU:OE2	2:B:1256:ASN:ND2	2.38	0.56
2:B:4191:GLY:O	2:B:4196:GLY:N	2.38	0.56
3:C:278:HIS:HD2	3:C:282:ARG:NH1	2.03	0.56
9:I:57:GLU:O	9:I:61:LYS:HG2	2.05	0.56
11:K:31:GLU:HA	14:N:32:SER:HB3	1.87	0.56
2:B:1276:GLY:O	2:B:1280:GLU:HG2	2.05	0.56
3:C:1116:LYS:O	3:C:1120:THR:HG23	2.05	0.56
1:A:232:TYR:HB2	1:A:239:TRP:CZ3	2.39	0.56
2:B:16:ASN:HB2	2:B:17:ARG:HH11	1.71	0.56
2:B:51:GLY:HA2	2:B:54:GLN:HE21	1.71	0.56
2:B:310:PHE:HA	2:B:313:LEU:HD12	1.86	0.56
2:B:425:ASP:OD1	2:B:426:ILE:HG13	2.04	0.56
2:B:1051:ASP:OD1	2:B:1174:HIS:NE2	2.38	0.56
3:C:1057:GLN:NE2	3:C:1061:GLU:OE2	2.36	0.56
11:K:45:GLN:O	11:K:49:LYS:HG2	2.04	0.56
1:A:62:LEU:HD13	1:A:327:PHE:CE2	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:707:THR:O	2:B:710:THR:OG1	2.18	0.56
2:B:988:ALA:O	2:B:992:THR:HG23	2.04	0.56
6:F:74:ILE:HD12	6:F:77:ILE:HD11	1.87	0.56
1:A:3492:LYS:O	1:A:3496:GLU:N	2.39	0.56
1:A:4135:GLY:O	1:A:4140:PHE:N	2.38	0.56
2:B:380:LEU:HD21	2:B:427:LEU:HA	1.86	0.56
2:B:839:LEU:O	2:B:842:GLU:HG2	2.06	0.56
2:B:3579:ILE:O	2:B:3625:MET:N	2.39	0.56
3:C:562:LYS:HA	3:C:565:LEU:HD12	1.88	0.56
12:L:74:TRP:CD2	12:L:109:LYS:HD3	2.41	0.56
13:M:76:LYS:HA	13:M:80:LEU:O	2.05	0.56
15:O:99:GLN:NE2	15:O:100:CYS:O	2.39	0.56
16:P:33:CYS:SG	16:P:38:ILE:HG23	2.45	0.56
1:A:255:GLY:HA3	1:A:268:ILE:HD11	1.87	0.56
1:A:341:TRP:HH2	2:B:967:GLN:HE22	1.53	0.56
2:B:658:GLN:HB3	2:B:667:ASP:HB3	1.86	0.56
2:B:918:GLY:HA2	2:B:921:SER:HB2	1.87	0.56
2:B:1325:TRP:HE1	2:B:1333:ILE:HG23	1.71	0.56
3:C:910:LYS:HB3	3:C:998:VAL:HG11	1.87	0.56
15:O:32:SER:HA	15:O:35:THR:OG1	2.05	0.56
2:B:133:MET:HB3	2:B:137:LEU:HD11	1.86	0.56
2:B:541:GLU:HA	2:B:616:ARG:HH12	1.71	0.56
3:C:874:HIS:HB3	3:C:884:LYS:HD2	1.87	0.56
3:C:1055:PHE:HE2	3:C:1093:LYS:HE3	1.70	0.56
14:N:80:LYS:O	14:N:128:GLY:HA2	2.05	0.56
16:P:43:PHE:HD1	16:P:100:LEU:HD21	1.69	0.56
2:B:110:VAL:HG12	3:C:122:GLU:HG2	1.86	0.56
2:B:928:ASN:OD1	2:B:932:ASN:ND2	2.39	0.56
2:B:1037:LEU:O	2:B:1041:ARG:HG2	2.06	0.56
2:B:1117:ILE:HG13	2:B:1197:PHE:CE2	2.41	0.56
2:B:1124:ILE:HG22	2:B:1207:VAL:HG12	1.88	0.56
3:C:78:LEU:HD12	3:C:131:LEU:HD12	1.88	0.56
15:O:45:LEU:HA	15:O:48:GLN:HE21	1.70	0.56
2:B:158:VAL:HA	2:B:161:VAL:HB	1.88	0.56
2:B:1047:LEU:HG	2:B:1047:LEU:O	2.06	0.56
3:C:3117:PHE:CB	3:C:3433:ALA:HB2	2.36	0.56
3:C:3355:GLN:O	3:C:3359:ALA:HB3	2.05	0.56
11:K:33:ALA:C	14:N:36:LYS:HD3	2.27	0.56
16:P:39:LEU:HG	16:P:95:ASN:HB2	1.87	0.56
2:B:176:LEU:HD22	2:B:243:LEU:HD21	1.87	0.56
2:B:544:HIS:CG	2:B:613:ILE:HG22	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1243:LYS:NZ	2:B:1264:ILE:HG23	2.21	0.56
3:C:807:GLU:N	3:C:807:GLU:OE2	2.39	0.56
8:H:22:LYS:NZ	8:H:23:GLU:OE2	2.38	0.56
16:P:36:CYS:CB	16:P:95:ASN:HD21	2.19	0.56
1:A:44:ASN:HB2	1:A:48:ASP:OD2	2.05	0.55
2:B:656:LEU:HD12	2:B:752:ILE:O	2.05	0.55
2:B:721:ASN:OD1	2:B:770:LYS:NZ	2.39	0.55
3:C:40:LEU:HD11	3:C:73:ALA:HB2	1.87	0.55
3:C:542:ILE:HD12	3:C:576:TYR:CD1	2.41	0.55
11:K:100:ILE:HG12	11:K:101:GLU:OE1	2.05	0.55
16:P:42:GLN:HG2	16:P:97:LYS:HG3	1.87	0.55
1:A:194:GLY:H	1:A:239:TRP:HD1	1.54	0.55
2:B:1172:LYS:HA	2:B:1176:VAL:HB	1.87	0.55
2:B:1240:PHE:HA	2:B:1243:LYS:HZ2	1.71	0.55
2:B:52:PHE:O	2:B:93:LYS:NZ	2.40	0.55
2:B:134:GLN:HB2	3:C:79:PHE:CZ	2.41	0.55
2:B:247:GLN:O	2:B:250:SER:OG	2.24	0.55
2:B:327:ILE:HD11	2:B:397:TYR:CE1	2.40	0.55
12:L:21:ILE:HA	12:L:96:PHE:HB3	1.88	0.55
12:L:33:LYS:HD3	12:L:60:PHE:HZ	1.70	0.55
1:A:170:GLN:HB2	2:B:861:ASP:HB3	1.88	0.55
1:A:272:SER:HA	1:A:287:PHE:HD1	1.72	0.55
1:A:1689:GLY:O	1:A:1693:THR:N	2.38	0.55
2:B:625:LEU:O	2:B:628:SER:OG	2.23	0.55
3:C:430:VAL:O	3:C:434:PRO:HD3	2.06	0.55
3:C:541:ASN:HB2	3:C:544:TYR:CD2	2.41	0.55
16:P:28:PHE:HB2	16:P:79:HIS:HB3	1.88	0.55
1:A:75:GLN:O	1:A:121:TRP:N	2.39	0.55
1:A:272:SER:HA	1:A:287:PHE:CD1	2.42	0.55
2:B:275:GLN:OE1	2:B:275:GLN:N	2.40	0.55
2:B:962:PHE:O	2:B:967:GLN:N	2.40	0.55
2:B:1099:THR:O	2:B:1103:VAL:HG23	2.07	0.55
12:L:84:CYS:HA	13:M:56:ILE:HG23	1.88	0.55
1:A:169:TYR:HB2	1:A:171:ARG:NE	2.22	0.55
2:B:67:GLN:H	2:B:85:LYS:NZ	2.02	0.55
2:B:326:LEU:HD22	2:B:330:LYS:HG3	1.89	0.55
2:B:1277:ARG:HH11	2:B:1277:ARG:HA	1.71	0.55
3:C:405:LEU:HD23	3:C:468:GLN:HE21	1.72	0.55
3:C:1032:GLN:HG3	3:C:1036:LYS:HG2	1.89	0.55
1:A:4080:ALA:HB1	1:A:4092:TYR:O	2.07	0.55
2:B:84:PHE:HZ	3:C:150:LYS:HD3	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:344:ILE:HD13	2:B:394:TYR:OH	2.05	0.55
2:B:429:LEU:HD13	2:B:470:PHE:CG	2.42	0.55
2:B:1285:GLU:HG3	2:B:1290:LEU:CD1	2.36	0.55
3:C:135:MET:HG3	3:C:165:PHE:HE2	1.71	0.55
11:K:37:LEU:CD1	14:N:36:LYS:HZ3	2.18	0.55
13:M:17:ILE:O	13:M:21:LYS:HG2	2.06	0.55
1:A:199:PRO:O	1:A:221:SER:OG	2.16	0.55
1:A:2176:THR:O	1:A:2177:ILE:N	2.40	0.55
2:B:118:LEU:HD13	2:B:158:VAL:HG12	1.88	0.55
2:B:123:SER:HB3	3:C:96:LEU:HD21	1.88	0.55
2:B:269:THR:HB	2:B:270:PRO:HD3	1.89	0.55
2:B:589:LEU:HD21	2:B:640:LYS:HB2	1.89	0.55
2:B:615:GLU:HA	2:B:619:TYR:CD2	2.42	0.55
2:B:987:ARG:HA	2:B:990:PHE:CD2	2.41	0.55
2:B:1123:GLY:O	2:B:1138:LYS:NZ	2.40	0.55
3:C:624:PHE:HB3	3:C:634:ILE:CG2	2.37	0.55
12:L:81:ASN:HB3	13:M:60:ASN:HD21	1.72	0.55
16:P:8:ILE:HD11	16:P:14:PHE:HD1	1.72	0.55
2:B:1154:GLU:HB3	2:B:1155:PRO:HD3	1.87	0.55
3:C:536:PHE:HD1	3:C:545:SER:HG	1.54	0.55
3:C:1112:THR:OG1	3:C:1179:ALA:O	2.20	0.55
3:C:1211:GLU:HG3	3:C:1214:GLN:HE21	1.72	0.55
2:B:179:HIS:HB3	2:B:203:TRP:CE2	2.42	0.54
3:C:457:LEU:HD23	3:C:460:LEU:HD12	1.89	0.54
3:C:1253:GLU:HA	3:C:1256:TYR:CE1	2.42	0.54
7:G:125:PHE:HA	7:G:139:PRO:HD2	1.88	0.54
15:O:13:VAL:O	15:O:17:ILE:HG12	2.07	0.54
1:A:1727:ASN:O	1:A:1731:LYS:N	2.39	0.54
2:B:718:ILE:HD11	2:B:766:ILE:O	2.07	0.54
2:B:862:TYR:O	2:B:866:ILE:HG12	2.07	0.54
2:B:1109:THR:HG23	2:B:1164:MET:HG3	1.89	0.54
3:C:936:GLN:HB3	3:C:1080:ASN:ND2	2.23	0.54
12:L:39:ASP:O	12:L:43:LYS:HG2	2.08	0.54
1:A:99:GLY:HA3	1:A:149:HIS:CE1	2.42	0.54
1:A:2406:CYS:O	1:A:2410:GLU:N	2.38	0.54
2:B:190:LYS:O	2:B:194:HIS:HB2	2.07	0.54
2:B:1061:GLN:HA	2:B:1064:ILE:HD12	1.89	0.54
3:C:928:LYS:HD2	3:C:957:ARG:NH2	2.15	0.54
2:B:344:ILE:HD11	2:B:397:TYR:HE2	1.70	0.54
2:B:1317:LEU:HD22	16:P:32:TRP:CZ3	2.43	0.54
9:I:30:MET:HE1	9:I:75:TRP:HH2	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:160:GLN:HB3	2:B:178:SER:OG	2.06	0.54
2:B:198:GLY:O	2:B:202:THR:HG23	2.06	0.54
2:B:836:ILE:HD13	2:B:839:LEU:HD21	1.90	0.54
2:B:939:ASN:OD1	2:B:940:ILE:N	2.40	0.54
2:B:1325:TRP:NE1	2:B:1333:ILE:HG23	2.22	0.54
2:B:1814:SER:O	2:B:1818:LEU:N	2.39	0.54
3:C:134:LEU:O	3:C:138:VAL:HG12	2.08	0.54
6:F:25:ILE:HD11	6:F:95:PHE:HB3	1.88	0.54
1:A:3438:HIS:O	1:A:3442:GLY:N	2.41	0.54
2:B:843:VAL:HG11	2:B:859:TYR:CE2	2.43	0.54
2:B:1240:PHE:CE2	2:B:1271:LEU:HD22	2.43	0.54
2:B:1317:LEU:CD1	16:P:77:LEU:H	2.20	0.54
3:C:349:ILE:HG23	3:C:357:ASN:HD21	1.73	0.54
3:C:970:TYR:HE1	3:C:977:LYS:HD2	1.73	0.54
1:A:2102:LEU:O	1:A:2106:GLY:N	2.40	0.54
2:B:137:LEU:HG	2:B:145:LEU:HB2	1.90	0.54
3:C:3378:ALA:O	3:C:3381:GLN:N	2.39	0.54
16:P:13:GLN:HA	16:P:16:ASP:OD1	2.08	0.54
17:T:179:CYS:HB3	17:T:192:TYR:CZ	2.42	0.54
1:A:194:GLY:N	1:A:239:TRP:HD1	2.06	0.54
1:A:219:GLY:O	1:A:226:TYR:N	2.41	0.54
2:B:335:ASN:HD21	2:B:340:LEU:HD13	1.73	0.54
2:B:1280:GLU:HA	2:B:1283:ASN:OD1	2.07	0.54
3:C:3187:ILE:CB	3:C:3360:GLU:CA	2.84	0.54
7:G:93:GLU:O	7:G:97:LYS:HG2	2.08	0.54
8:H:57:TRP:CE2	8:H:90:LYS:HD2	2.43	0.54
1:A:169:TYR:HB2	1:A:171:ARG:HE	1.73	0.54
1:A:2499:ARG:O	1:A:2503:PHE:N	2.40	0.54
2:B:118:LEU:HD12	2:B:162:TYR:HD1	1.72	0.54
2:B:527:PHE:HB3	2:B:530:LEU:HD13	1.90	0.54
2:B:1107:ARG:HG3	2:B:1111:LYS:CE	2.38	0.54
2:B:1245:PRO:C	2:B:1360:LYS:HB2	2.28	0.54
3:C:580:LEU:HD13	3:C:641:TYR:CD2	2.42	0.54
8:H:24:VAL:HA	8:H:49:PHE:HZ	1.73	0.54
15:O:9:ILE:HG23	15:O:12:GLU:HB3	1.90	0.54
2:B:164:LEU:O	2:B:168:ILE:HG12	2.08	0.54
2:B:1054:ILE:HD11	2:B:1098:TYR:HB2	1.90	0.54
3:C:123:ILE:HD11	3:C:134:LEU:HD12	1.90	0.54
3:C:325:GLU:HB3	3:C:338:THR:OG1	2.08	0.54
3:C:352:ILE:HB	3:C:357:ASN:HD22	1.72	0.54
3:C:715:ILE:HD11	18:V:222:UNK:HA	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:716:ILE:O	3:C:720:GLU:HG2	2.07	0.54
3:C:1124:LYS:HB3	3:C:1125:PRO:HD3	1.90	0.54
3:C:3342:TYR:O	3:C:3346:SER:HA	2.06	0.54
2:B:1110:GLN:HA	2:B:1164:MET:SD	2.48	0.53
2:B:1264:ILE:HG22	2:B:1268:TYR:CE2	2.43	0.53
3:C:410:GLY:O	3:C:414:LYS:HG2	2.06	0.53
3:C:1037:LYS:HA	3:C:1040:LYS:HE2	1.90	0.53
3:C:1139:LEU:O	3:C:1143:ARG:HG3	2.08	0.53
1:A:18:PRO:HB2	1:A:338:PHE:CE2	2.43	0.53
2:B:240:ASN:O	2:B:243:LEU:HG	2.07	0.53
2:B:449:GLY:HA2	2:B:452:LEU:HG	1.89	0.53
2:B:730:LEU:HG	2:B:731:PRO:HD3	1.89	0.53
2:B:812:ASP:HB2	2:B:900:PHE:CE2	2.42	0.53
2:B:904:LEU:HG	2:B:913:PHE:CE1	2.43	0.53
2:B:936:ASP:HA	2:B:939:ASN:ND2	2.23	0.53
2:B:1229:PHE:HE2	2:B:1277:ARG:HG3	1.72	0.53
2:B:1314:ALA:HB2	16:P:75:SER:C	2.29	0.53
3:C:1184:ARG:HA	3:C:1187:TRP:HD1	1.72	0.53
3:C:2324:GLY:O	3:C:2327:LEU:N	2.41	0.53
12:L:52:ASP:OD1	12:L:56:ASN:ND2	2.41	0.53
15:O:38:TYR:HD1	15:O:106:ILE:HG22	1.73	0.53
17:T:131:PHE:CD1	17:T:172:PHE:HE2	2.25	0.53
1:A:3048:SER:O	1:A:3052:GLY:N	2.41	0.53
1:A:4006:GLU:O	1:A:4011:LEU:N	2.41	0.53
2:B:133:MET:HG3	2:B:148:LYS:HG3	1.90	0.53
2:B:671:VAL:HG11	2:B:673:PHE:CZ	2.43	0.53
2:B:1057:LEU:HD13	2:B:1094:TRP:HB3	1.90	0.53
2:B:1212:ILE:HG22	2:B:1213:PRO:HG2	1.73	0.53
3:C:17:ILE:O	3:C:20:SER:OG	2.26	0.53
3:C:674:LEU:HB2	18:V:232:UNK:CB	2.38	0.53
3:C:982:LYS:HG3	3:C:984:THR:HG22	1.91	0.53
14:N:34:ILE:HD12	14:N:71:ILE:HG13	1.90	0.53
16:P:16:ASP:OD2	16:P:17:ILE:N	2.41	0.53
17:T:107:LYS:HB2	17:T:177:ARG:HG2	1.90	0.53
2:B:16:ASN:HB2	2:B:17:ARG:NH1	2.24	0.53
2:B:84:PHE:CZ	3:C:150:LYS:HD3	2.44	0.53
2:B:197:GLU:O	2:B:201:ILE:HG12	2.08	0.53
2:B:653:GLN:HG2	2:B:671:VAL:HA	1.90	0.53
2:B:1366:VAL:HA	2:B:1369:VAL:HB	1.89	0.53
3:C:478:LEU:HD23	3:C:484:LEU:HB2	1.88	0.53
17:T:152:ILE:O	17:T:156:ILE:HG12	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:5:LEU:HD23	1:A:304:ILE:O	2.09	0.53
1:A:316:CYS:HB3	1:A:350:TRP:CD2	2.44	0.53
1:A:3733:SER:O	1:A:3737:GLY:N	2.41	0.53
3:C:135:MET:HG2	3:C:139:TYR:HD2	1.73	0.53
3:C:1235:PRO:HB3	3:C:1249:LEU:HD11	1.90	0.53
9:I:64:LYS:HE2	9:I:75:TRP:O	2.09	0.53
11:K:42:ARG:NH2	11:K:67:TYR:OH	2.42	0.53
11:K:95:PHE:CZ	11:K:106:LEU:HD11	2.43	0.53
1:A:60:LEU:HD13	1:A:69:TRP:CE2	2.44	0.53
2:B:203:TRP:CZ3	2:B:253:VAL:HG13	2.43	0.53
2:B:893:ARG:NH1	2:B:895:ASP:O	2.40	0.53
2:B:1325:TRP:HA	2:B:1328:LYS:CG	2.37	0.53
3:C:44:PHE:HE1	3:C:51:ASN:C	2.12	0.53
3:C:596:LEU:HD21	3:C:598:ARG:HD2	1.90	0.53
3:C:1140:GLU:HA	3:C:1143:ARG:HD2	1.91	0.53
6:F:61:LYS:HB2	8:H:36:ASN:ND2	2.24	0.53
8:H:71:PHE:O	8:H:73:ARG:NH2	2.41	0.53
11:K:44:THR:O	11:K:48:LEU:HG	2.09	0.53
14:N:33:LYS:O	14:N:36:LYS:HB2	2.08	0.53
15:O:14:GLN:HB2	15:O:97:LEU:HD11	1.91	0.53
16:P:25:LEU:HB2	16:P:55:ILE:HD13	1.89	0.53
2:B:915:PRO:HA	2:B:927:ARG:HH21	1.74	0.53
2:B:1260:ALA:O	2:B:1264:ILE:HG13	2.08	0.53
3:C:547:LYS:O	3:C:551:LYS:HG2	2.09	0.53
3:C:750:ASN:HD21	3:C:886:ILE:HG22	1.74	0.53
3:C:945:ASN:HB3	3:C:946:PRO:HD3	1.91	0.53
8:H:16:MET:SD	8:H:76:TYR:N	2.82	0.53
13:M:71:LYS:O	13:M:85:TRP:HA	2.07	0.53
2:B:105:ALA:HA	2:B:108:VAL:HG22	1.91	0.53
2:B:537:ALA:HA	2:B:540:LEU:HB2	1.91	0.53
2:B:1350:LYS:HE2	2:B:1370:LYS:HE3	1.91	0.53
3:C:1091:GLU:O	3:C:1094:LEU:HG	2.08	0.53
12:L:67:PHE:HB3	12:L:74:TRP:HZ2	1.74	0.53
16:P:80:VAL:HG12	16:P:103:MET:SD	2.48	0.53
1:A:266:TYR:O	1:A:293:VAL:HA	2.09	0.53
2:B:814:TYR:N	2:B:1075:TRP:CZ2	2.57	0.53
2:B:1285:GLU:HG3	2:B:1290:LEU:HB2	1.90	0.53
3:C:98:ILE:HG13	3:C:116:ASN:O	2.09	0.53
6:F:44:LYS:HE3	6:F:48:ILE:HD11	1.91	0.53
14:N:29:PHE:HD1	14:N:76:VAL:HG11	1.74	0.53
16:P:65:LEU:HG	16:P:68:ILE:HD12	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:256:ILE:O	1:A:268:ILE:HA	2.08	0.53
2:B:436:PHE:O	2:B:533:ARG:NH1	2.42	0.53
2:B:470:PHE:CZ	2:B:488:ASP:HB3	2.43	0.53
2:B:1170:LYS:O	2:B:1173:LYS:HE2	2.09	0.53
3:C:127:THR:HB	3:C:130:MET:HB3	1.90	0.53
3:C:3378:ALA:O	3:C:3379:GLN:C	2.48	0.53
11:K:24:ALA:HB2	11:K:100:ILE:HD12	1.91	0.53
1:A:283:THR:HA	2:B:955:PHE:CZ	2.44	0.52
2:B:1090:ARG:HA	2:B:1093:ARG:HE	1.74	0.52
2:B:1271:LEU:HD12	2:B:1274:ILE:HG21	1.91	0.52
11:K:28:TRP:CE2	14:N:33:LYS:HE3	2.43	0.52
1:A:345:TRP:CZ2	2:B:967:GLN:HG2	2.45	0.52
1:A:3764:LEU:O	1:A:3768:LEU:N	2.38	0.52
1:A:3991:SER:O	1:A:3995:ALA:HB3	2.10	0.52
3:C:269:LYS:HE3	3:C:284:ARG:HD3	1.92	0.52
3:C:1055:PHE:CE2	3:C:1093:LYS:HE3	2.45	0.52
1:A:143:PRO:HD3	1:A:187:TRP:CD1	2.44	0.52
2:B:60:ASN:ND2	3:C:137:SER:O	2.42	0.52
2:B:67:GLN:HA	2:B:71:CYS:O	2.10	0.52
2:B:1356:ILE:HA	2:B:1359:PHE:HD2	1.75	0.52
3:C:48:GLU:HG3	3:C:100:ASN:O	2.08	0.52
3:C:478:LEU:HB3	3:C:484:LEU:HD22	1.90	0.52
3:C:944:LEU:HD11	3:C:1071:ILE:HD11	1.92	0.52
6:F:86:GLU:O	6:F:100:ILE:HA	2.10	0.52
7:G:79:VAL:HG11	7:G:100:ALA:HB1	1.91	0.52
12:L:28:GLN:O	12:L:32:LYS:HG2	2.09	0.52
2:B:88:GLY:O	2:B:89:ILE:HD13	2.10	0.52
2:B:545:ILE:O	2:B:549:GLU:HG2	2.09	0.52
2:B:1151:LYS:HG3	2:B:1208:LYS:HE3	1.90	0.52
2:B:1315:ILE:CG1	2:B:1362:TYR:HD1	2.22	0.52
2:B:1982:THR:O	2:B:1994:LEU:N	2.42	0.52
2:B:2372:ARG:CB	3:C:1543:GLY:HA2	2.39	0.52
2:B:3874:ILE:O	2:B:3878:ILE:N	2.40	0.52
3:C:696:ILE:O	3:C:700:LYS:HD3	2.10	0.52
11:K:29:PRO:HD2	14:N:30:TYR:HD2	1.75	0.52
11:K:30:PRO:HG3	14:N:36:LYS:NZ	2.24	0.52
1:A:10:LEU:HD22	1:A:349:LEU:HD22	1.91	0.52
1:A:22:SER:HB3	1:A:340:GLY:CA	2.39	0.52
2:B:656:LEU:O	2:B:756:ARG:NH2	2.42	0.52
2:B:813:ASP:CG	2:B:1075:TRP:HE1	2.12	0.52
2:B:885:GLN:HA	2:B:894:ASN:ND2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1130:ASP:OD1	2:B:1135:HIS:NE2	2.39	0.52
3:C:269:LYS:CD	3:C:281:GLN:HA	2.38	0.52
3:C:470:PHE:CZ	3:C:524:LEU:HD13	2.45	0.52
3:C:548:LEU:HD12	3:C:551:LYS:HG3	1.91	0.52
3:C:853:VAL:HG23	3:C:854:GLU:H	1.74	0.52
3:C:1099:ASP:O	3:C:1103:ARG:HG2	2.10	0.52
6:F:83:HIS:N	6:F:103:CYS:SG	2.83	0.52
2:B:596:ARG:HB3	2:B:633:ILE:HG21	1.91	0.52
2:B:1052:GLU:O	2:B:1056:HIS:ND1	2.43	0.52
3:C:200:LEU:HB3	3:C:275:HIS:NE2	2.24	0.52
3:C:969:LEU:HB2	3:C:974:GLN:HE22	1.75	0.52
11:K:47:ALA:HA	11:K:50:LYS:HE2	1.91	0.52
16:P:28:PHE:HA	16:P:58:VAL:O	2.10	0.52
17:T:186:LEU:HA	17:T:189:ARG:HG2	1.90	0.52
1:A:322:GLU:OE2	1:A:341:TRP:N	2.42	0.52
2:B:418:SER:O	2:B:422:ARG:HG3	2.10	0.52
2:B:1256:ASN:OD1	2:B:1257:ILE:N	2.43	0.52
3:C:624:PHE:HE2	3:C:641:TYR:CD2	2.27	0.52
6:F:34:LYS:HG2	6:F:35:ARG:H	1.74	0.52
11:K:35:ASP:OD2	14:N:39:LYS:HE2	2.10	0.52
2:B:319:PRO:HA	2:B:322:HIS:HB2	1.91	0.52
2:B:523:LEU:O	2:B:526:ASN:HB2	2.10	0.52
3:C:542:ILE:HD11	3:C:579:GLU:OE1	2.10	0.52
3:C:566:THR:HA	3:C:569:TYR:CD2	2.45	0.52
16:P:39:LEU:HD11	16:P:96:GLN:N	2.25	0.52
1:A:7:TRP:CZ3	1:A:350:TRP:HB3	2.45	0.52
1:A:220:TRP:HE1	2:B:956:LEU:CD1	2.16	0.52
1:A:1327:ARG:O	1:A:1330:ASN:N	2.42	0.52
2:B:28:LYS:HD3	2:B:73:PHE:HD1	1.75	0.52
2:B:1291:GLN:OE1	2:B:1291:GLN:N	2.38	0.52
2:B:3985:PHE:N	2:B:4076:LEU:O	2.42	0.52
2:B:4390:SER:O	2:B:4394:SER:N	2.43	0.52
3:C:1133:GLY:HA3	3:C:1268:ARG:HD3	1.92	0.52
9:I:99:TYR:HB2	9:I:103:LEU:H	1.75	0.52
13:M:67:HIS:HB3	13:M:85:TRP:HB2	1.91	0.52
16:P:24:VAL:HA	16:P:54:THR:O	2.09	0.52
1:A:60:LEU:HD13	1:A:69:TRP:CD2	2.45	0.52
1:A:3615:CYS:O	1:A:3620:HIS:N	2.43	0.52
2:B:525:ASP:O	2:B:528:GLU:HG3	2.10	0.52
2:B:737:VAL:HG12	2:B:740:LYS:HD2	1.92	0.52
2:B:789:LYS:HE2	2:B:839:LEU:HB3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:331:THR:HB	3:C:334:GLN:HG3	1.92	0.52
6:F:78:ARG:HB2	6:F:88:ILE:HG22	1.91	0.52
7:G:65:ASN:O	7:G:69:THR:HG23	2.10	0.52
9:I:30:MET:HE1	9:I:75:TRP:CH2	2.45	0.52
2:B:260:LEU:HD13	2:B:268:THR:HG21	1.91	0.51
2:B:503:LEU:O	2:B:506:VAL:HG12	2.10	0.51
2:B:1318:ILE:HG22	2:B:1322:TYR:CE2	2.45	0.51
3:C:785:HIS:C	3:C:789:LYS:HZ2	2.14	0.51
13:M:74:PHE:HD2	13:M:83:LEU:HB2	1.74	0.51
16:P:6:ILE:HB	16:P:56:VAL:HG22	1.92	0.51
17:T:103:SER:O	17:T:107:LYS:HG3	2.10	0.51
1:A:162:GLY:HA2	1:A:174:PHE:O	2.10	0.51
1:A:344:ASN:ND2	2:B:969:LEU:HB3	2.23	0.51
2:B:544:HIS:O	2:B:548:LEU:HD13	2.10	0.51
2:B:1148:SER:CB	2:B:1214:LEU:HD22	2.33	0.51
3:C:81:THR:HA	3:C:126:ASN:HA	1.91	0.51
3:C:1076:LEU:HD23	3:C:1076:LEU:H	1.74	0.51
3:C:1164:ASP:HA	3:C:1167:LEU:O	2.10	0.51
3:C:3342:TYR:O	3:C:3345:LYS:C	2.48	0.51
6:F:87:TYR:OH	6:F:98:LEU:HD13	2.11	0.51
2:B:671:VAL:HG12	2:B:673:PHE:H	1.75	0.51
2:B:709:ARG:O	2:B:713:VAL:HG23	2.10	0.51
2:B:862:TYR:O	2:B:865:VAL:HG12	2.10	0.51
3:C:488:PHE:HA	3:C:491:ILE:HD12	1.91	0.51
3:C:3378:ALA:C	3:C:3380:ILE:N	2.63	0.51
8:H:63:ARG:HH21	8:H:85:ALA:N	2.09	0.51
16:P:15:GLU:O	16:P:19:GLU:HG2	2.11	0.51
1:A:329:ASP:H	1:A:334:ARG:NH1	2.08	0.51
1:A:1302:ASP:O	1:A:1304:SER:N	2.44	0.51
1:A:3409:PHE:O	1:A:3413:LYS:N	2.43	0.51
3:C:9:ARG:NH2	3:C:117:ASP:OD2	2.40	0.51
3:C:234:GLU:O	3:C:368:LYS:NZ	2.43	0.51
14:N:81:ILE:HG23	14:N:126:VAL:HG13	1.91	0.51
2:B:1145:LYS:HE2	2:B:1150:VAL:HG21	1.93	0.51
2:B:1271:LEU:O	2:B:1274:ILE:HB	2.11	0.51
3:C:203:SER:O	3:C:207:GLN:HG2	2.11	0.51
3:C:582:THR:O	3:C:585:ARG:HG3	2.11	0.51
3:C:789:LYS:O	3:C:793:GLN:HG2	2.11	0.51
3:C:2397:GLY:O	3:C:2633:ASN:N	2.43	0.51
15:O:20:SER:HA	15:O:53:TYR:HE2	1.75	0.51
3:C:53:ILE:HB	3:C:95:PHE:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:752:LEU:HD13	3:C:795:ILE:HG12	1.93	0.51
3:C:1120:THR:O	3:C:1124:LYS:HB2	2.11	0.51
6:F:73:ASP:OD1	6:F:74:ILE:N	2.43	0.51
15:O:94:ASP:OD1	15:O:116:ALA:N	2.43	0.51
2:B:91:VAL:HA	2:B:109:VAL:O	2.10	0.51
2:B:173:MET:HE1	2:B:218:LEU:HA	1.93	0.51
2:B:1459:THR:N	2:B:1466:THR:O	2.43	0.51
3:C:12:TRP:O	3:C:16:THR:HG23	2.10	0.51
1:A:209:ALA:HB3	1:A:264:TRP:CD1	2.46	0.51
2:B:1250:GLU:HG3	2:B:1256:ASN:HD22	1.74	0.51
3:C:902:THR:O	3:C:905:SER:OG	2.27	0.51
3:C:3180:CYS:CB	3:C:3366:ALA:C	2.79	0.51
7:G:80:ASN:HA	7:G:143:PHE:HA	1.92	0.51
17:T:186:LEU:H	17:T:189:ARG:HH11	1.58	0.51
1:A:2891:ARG:O	1:A:2895:LEU:N	2.44	0.51
1:A:3850:PRO:O	1:A:3855:MET:N	2.43	0.51
2:B:563:LEU:HB2	2:B:564:GLU:OE1	2.09	0.51
2:B:653:GLN:HE21	2:B:655:LYS:H	1.57	0.51
2:B:927:ARG:NH1	2:B:929:THR:OG1	2.44	0.51
3:C:420:LYS:HB3	3:C:421:LYS:HZ2	1.75	0.51
16:P:28:PHE:CD2	16:P:74:VAL:HG11	2.45	0.51
3:C:78:LEU:HD23	3:C:78:LEU:O	2.11	0.51
3:C:336:ILE:O	3:C:339:LEU:N	2.44	0.51
3:C:374:ILE:HD11	3:C:453:PHE:CE2	2.46	0.51
3:C:596:LEU:HG	3:C:598:ARG:HG2	1.92	0.51
11:K:37:LEU:HB2	14:N:36:LYS:CD	2.41	0.51
14:N:37:ILE:HG23	14:N:70:LYS:HZ3	1.76	0.51
16:P:63:GLU:HA	16:P:66:GLU:CD	2.30	0.51
2:B:155:ASN:OD1	2:B:180:LYS:NZ	2.44	0.50
2:B:720:ASP:HB3	2:B:724:HIS:CE1	2.45	0.50
2:B:876:GLN:HG3	2:B:966:LYS:HD2	1.93	0.50
3:C:193:ASP:OD1	3:C:267:ILE:HG21	2.10	0.50
3:C:807:GLU:O	3:C:811:LYS:NZ	2.35	0.50
3:C:892:TRP:O	3:C:896:GLN:HG2	2.11	0.50
11:K:94:ARG:O	11:K:108:TYR:HA	2.11	0.50
2:B:1240:PHE:HD1	2:B:1243:LYS:NZ	2.08	0.50
2:B:1361:GLY:O	2:B:1364:VAL:HG12	2.12	0.50
3:C:263:LYS:HG3	3:C:264:ASP:N	2.26	0.50
3:C:576:TYR:CD1	3:C:624:PHE:HE1	2.29	0.50
3:C:790:LYS:O	3:C:793:GLN:HB2	2.11	0.50
6:F:85:TYR:HE2	6:F:87:TYR:HB2	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:15:ASP:N	8:H:76:TYR:O	2.36	0.50
16:P:9:THR:HA	16:P:65:LEU:HD12	1.94	0.50
1:A:190:LEU:HD13	1:A:232:TYR:CZ	2.47	0.50
2:B:110:VAL:H	3:C:122:GLU:HG2	1.75	0.50
2:B:301:LYS:HA	2:B:316:LEU:HD23	1.93	0.50
2:B:449:GLY:HA2	2:B:452:LEU:CG	2.41	0.50
2:B:859:TYR:CE2	2:B:863:VAL:HG21	2.47	0.50
3:C:1109:ASP:O	3:C:1113:GLU:HG2	2.11	0.50
6:F:97:MET:N	6:F:97:MET:SD	2.84	0.50
1:A:4036:THR:O	1:A:4040:GLN:N	2.45	0.50
3:C:260:LEU:HD22	3:C:307:LEU:HD22	1.93	0.50
3:C:1107:LEU:HB3	3:C:1156:VAL:HG21	1.93	0.50
7:G:72:THR:HB	7:G:150:THR:OG1	2.12	0.50
16:P:17:ILE:HD13	16:P:20:LYS:HE3	1.93	0.50
2:B:135:ASN:HB3	3:C:82:THR:HG21	1.93	0.50
2:B:797:PHE:HE1	2:B:829:VAL:HA	1.77	0.50
2:B:1311:MET:C	2:B:1362:TYR:HE1	2.14	0.50
9:I:43:GLN:NE2	9:I:47:GLU:OE2	2.33	0.50
12:L:28:GLN:HE22	12:L:31:LEU:HD23	1.75	0.50
15:O:101:TYR:HB3	15:O:108:ALA:HB3	1.93	0.50
17:T:41:SER:O	17:T:45:LYS:HG2	2.11	0.50
1:A:18:PRO:HB2	1:A:338:PHE:HE2	1.77	0.50
1:A:192:PRO:CA	1:A:239:TRP:HE1	2.25	0.50
1:A:334:ARG:CB	1:A:353:ASN:HA	2.42	0.50
2:B:462:GLU:HG2	2:B:499:LEU:HD21	1.92	0.50
2:B:533:ARG:HB3	2:B:535:ILE:HG12	1.94	0.50
2:B:877:THR:HG22	2:B:881:HIS:CE1	2.47	0.50
3:C:177:ARG:NE	3:C:259:GLN:HA	2.25	0.50
3:C:1026:LEU:HD12	3:C:1027:CYS:N	2.25	0.50
3:C:1228:ARG:HA	3:C:1228:ARG:NE	2.27	0.50
1:A:213:GLN:HB2	1:A:232:TYR:O	2.12	0.50
1:A:3840:TYR:O	1:A:3844:LYS:N	2.45	0.50
2:B:1114:LEU:O	2:B:1118:GLU:HG2	2.12	0.50
2:B:1328:LYS:HG2	2:B:1332:GLN:HG2	1.93	0.50
3:C:44:PHE:HB2	3:C:53:ILE:HD11	1.92	0.50
3:C:91:LYS:HD3	3:C:125:PRO:HD3	1.93	0.50
3:C:250:MET:HA	3:C:314:VAL:HG11	1.93	0.50
3:C:499:GLY:HA2	3:C:509:LYS:HG3	1.93	0.50
3:C:1211:GLU:HG3	3:C:1214:GLN:NE2	2.27	0.50
6:F:25:ILE:HD13	6:F:97:MET:HG3	1.93	0.50
9:I:33:ASP:N	9:I:33:ASP:OD1	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:27:ILE:HG21	15:O:32:SER:OG	2.10	0.50
1:A:310:GLU:HG3	1:A:311:THR:H	1.76	0.50
1:A:3552:ILE:O	1:A:3556:PHE:N	2.43	0.50
2:B:387:CYS:O	2:B:391:LYS:HD2	2.10	0.50
3:C:44:PHE:CZ	3:C:97:ARG:HB3	2.46	0.50
3:C:1235:PRO:HD3	3:C:1252:PHE:CE2	2.47	0.50
2:B:45:ASN:HD21	2:B:48:GLU:CD	2.15	0.50
2:B:119:GLU:O	2:B:122:ASN:HB3	2.12	0.50
2:B:332:LYS:HB3	2:B:405:TRP:CD1	2.46	0.50
2:B:454:GLU:O	2:B:458:GLN:HB3	2.10	0.50
2:B:1138:LYS:HE3	2:B:1145:LYS:HD3	1.93	0.50
2:B:1222:ILE:HG12	2:B:1284:LEU:HD13	1.93	0.50
2:B:1252:MET:HB3	2:B:1255:GLU:OE1	2.11	0.50
3:C:27:ILE:HG12	3:C:68:ILE:HA	1.93	0.50
3:C:370:THR:HG21	3:C:450:PHE:HB2	1.94	0.50
3:C:971:ASN:H	3:C:974:GLN:HE21	1.60	0.50
3:C:1184:ARG:HA	3:C:1187:TRP:CD1	2.47	0.50
6:F:77:ILE:O	6:F:89:ILE:HB	2.11	0.50
11:K:37:LEU:HD22	14:N:33:LYS:HZ2	1.76	0.50
14:N:39:LYS:HA	14:N:113:TYR:CE2	2.47	0.50
2:B:26:LYS:HD3	2:B:74:TYR:HE1	1.77	0.49
2:B:309:ASP:HA	2:B:358:PHE:CE2	2.47	0.49
2:B:1040:CYS:O	2:B:1045:PRO:HD3	2.11	0.49
2:B:1317:LEU:HD13	16:P:77:LEU:H	1.76	0.49
3:C:254:THR:O	3:C:258:GLU:HG3	2.12	0.49
3:C:278:HIS:HB2	3:C:282:ARG:HD3	1.94	0.49
3:C:532:ILE:HG21	3:C:564:ASN:HB3	1.94	0.49
3:C:633:GLU:HA	3:C:636:ARG:HH11	1.77	0.49
3:C:1035:ILE:HG21	3:C:1095:GLN:HG2	1.94	0.49
12:L:16:LEU:HD22	12:L:17:PRO:HD2	1.93	0.49
1:A:144:GLN:NE2	1:A:145:PRO:O	2.46	0.49
1:A:276:PHE:HB2	1:A:282:ARG:CG	2.41	0.49
2:B:187:THR:HB	2:B:188:PRO:HD3	1.95	0.49
2:B:876:GLN:CD	2:B:966:LYS:HB3	2.31	0.49
2:B:1148:SER:HG	2:B:1213:PRO:C	1.93	0.49
2:B:1261:TYR:O	2:B:1265:MET:N	2.44	0.49
3:C:45:LEU:O	3:C:106:LYS:NZ	2.45	0.49
6:F:87:TYR:HA	6:F:99:ALA:O	2.12	0.49
1:A:221:SER:HB2	1:A:226:TYR:CE1	2.40	0.49
1:A:2827:ILE:O	1:A:2831:GLU:N	2.45	0.49
1:A:3217:ILE:O	1:A:3221:SER:N	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4001:ASN:O	1:A:4005:GLN:N	2.39	0.49
1:A:4085:GLY:O	1:A:4088:GLY:N	2.46	0.49
2:B:137:LEU:HB3	2:B:142:TRP:CD1	2.37	0.49
2:B:606:LEU:HD13	2:B:612:GLY:HA2	1.94	0.49
2:B:663:LYS:HD3	2:B:666:ASN:HB3	1.94	0.49
2:B:688:LEU:HD12	2:B:691:ARG:HH22	1.77	0.49
3:C:89:GLN:HE22	3:C:91:LYS:NZ	2.09	0.49
3:C:443:ASP:OD2	3:C:443:ASP:N	2.45	0.49
3:C:3332:ILE:O	3:C:3333:LEU:C	2.49	0.49
8:H:73:ARG:HH11	8:H:73:ARG:HG2	1.76	0.49
1:A:53:PRO:O	1:A:82:ARG:HB3	2.12	0.49
1:A:4155:LYS:O	1:A:4159:SER:N	2.45	0.49
2:B:127:GLU:OE1	2:B:127:GLU:N	2.45	0.49
2:B:132:VAL:HG22	3:C:75:ASP:O	2.12	0.49
2:B:892:LYS:HG2	2:B:893:ARG:H	1.78	0.49
2:B:1324:ASP:O	2:B:1328:LYS:HG3	2.12	0.49
3:C:591:LYS:HE3	3:C:596:LEU:HD22	1.95	0.49
3:C:715:ILE:HG12	18:V:221:UNK:O	2.13	0.49
3:C:896:GLN:O	3:C:900:ASN:ND2	2.39	0.49
3:C:1101:HIS:O	3:C:1105:ARG:HG2	2.12	0.49
11:K:30:PRO:HG3	14:N:36:LYS:HZ2	1.77	0.49
1:A:48:ASP:HA	1:A:51:ILE:HG12	1.94	0.49
1:A:2324:ASN:HA	1:A:2327:ASN:O	2.13	0.49
2:B:96:LEU:HD23	2:B:99:LEU:HD23	1.94	0.49
2:B:337:PRO:HD3	2:B:404:ASN:HB2	1.93	0.49
2:B:351:ILE:HG21	2:B:416:LEU:HD22	1.95	0.49
2:B:876:GLN:CG	2:B:966:LYS:HD2	2.42	0.49
2:B:1034:ASN:O	2:B:1038:LYS:HG2	2.13	0.49
3:C:21:LEU:HD21	3:C:57:TYR:CD1	2.48	0.49
3:C:46:SER:HA	3:C:106:LYS:NZ	2.28	0.49
3:C:805:ARG:O	3:C:809:ASN:ND2	2.46	0.49
3:C:1054:LYS:O	3:C:1058:ILE:HG12	2.12	0.49
3:C:1143:ARG:O	3:C:1146:GLN:HB2	2.13	0.49
3:C:1146:GLN:HA	3:C:1149:ILE:HD12	1.94	0.49
8:H:49:PHE:HA	8:H:52:ARG:HG2	1.93	0.49
8:H:60:ILE:HG21	8:H:65:PHE:CE2	2.47	0.49
17:T:163:LEU:HD22	17:T:166:LYS:HB2	1.94	0.49
2:B:211:LEU:HD12	2:B:277:GLU:HB3	1.94	0.49
2:B:436:PHE:HA	2:B:533:ARG:NH1	2.28	0.49
2:B:524:LEU:HB3	2:B:611:GLN:HG3	1.93	0.49
2:B:1152:ASP:O	2:B:1155:PRO:HD2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1325:TRP:HA	2:B:1328:LYS:CD	2.42	0.49
3:C:241:THR:HA	3:C:244:ILE:HD12	1.95	0.49
3:C:409:LEU:HD11	3:C:461:ILE:HG12	1.93	0.49
3:C:482:ASP:OD1	3:C:483:VAL:N	2.45	0.49
3:C:805:ARG:HG3	3:C:806:ILE:N	2.27	0.49
3:C:948:LEU:HD13	3:C:1010:LYS:HG2	1.95	0.49
3:C:3439:GLN:O	3:C:3443:LEU:N	2.42	0.49
1:A:225:GLN:HG3	1:A:282:ARG:NH1	2.27	0.49
2:B:17:ARG:NH1	3:C:19:ASP:OD2	2.46	0.49
2:B:839:LEU:O	2:B:843:VAL:HG23	2.12	0.49
3:C:663:ILE:HG22	3:C:667:LYS:NZ	2.28	0.49
6:F:94:ASP:OD1	6:F:94:ASP:N	2.46	0.49
9:I:83:TYR:CE2	9:I:85:TYR:HD1	2.30	0.49
16:P:72:HIS:HB2	16:P:74:VAL:HG23	1.95	0.49
2:B:285:ALA:O	2:B:288:ASN:HB2	2.13	0.49
2:B:736:LEU:HA	2:B:739:LYS:HD2	1.94	0.49
2:B:811:PRO:HB3	2:B:900:PHE:HA	1.94	0.49
2:B:872:SER:HB3	2:B:966:LYS:HE3	1.94	0.49
3:C:135:MET:HA	3:C:139:TYR:CD2	2.47	0.49
3:C:1116:LYS:HG2	3:C:1182:LEU:HD21	1.95	0.49
17:T:154:GLN:O	17:T:158:GLU:HG2	2.13	0.49
1:A:158:VAL:HB	1:A:180:LEU:HB3	1.93	0.49
2:B:137:LEU:HD21	2:B:145:LEU:HD22	1.94	0.49
2:B:248:LEU:HA	2:B:253:VAL:HG11	1.94	0.49
2:B:500:GLU:HG2	2:B:535:ILE:HB	1.95	0.49
2:B:788:GLN:HA	2:B:791:HIS:CD2	2.47	0.49
2:B:1291:GLN:H	2:B:1291:GLN:CD	2.15	0.49
3:C:52:LYS:HA	3:C:95:PHE:O	2.11	0.49
3:C:56:TYR:HE1	3:C:76:PRO:HD2	1.78	0.49
3:C:626:GLU:H	3:C:629:ILE:HG13	1.78	0.49
3:C:3194:ALA:CB	3:C:3353:ARG:N	2.71	0.49
12:L:95:PHE:HD1	12:L:106:LEU:HB2	1.78	0.49
13:M:5:PRO:HD3	13:M:25:ILE:HD11	1.94	0.49
16:P:7:GLU:HA	16:P:57:LYS:O	2.12	0.49
1:A:334:ARG:HB3	1:A:353:ASN:HA	1.95	0.49
1:A:1300:GLN:O	1:A:1302:ASP:N	2.44	0.49
2:B:467:VAL:O	2:B:471:THR:HG23	2.13	0.49
2:B:1315:ILE:HG12	2:B:1362:TYR:CD1	2.46	0.49
3:C:572:ILE:O	3:C:576:TYR:HD2	1.95	0.49
3:C:580:LEU:HD13	3:C:641:TYR:CE2	2.48	0.49
11:K:29:PRO:HB2	14:N:30:TYR:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:14:GLU:OE2	13:M:18:LYS:HD3	2.13	0.49
15:O:68:CYS:SG	15:O:113:PHE:HB2	2.53	0.49
1:A:205:ALA:HA	1:A:215:MET:O	2.13	0.48
2:B:1126:LYS:HZ1	2:B:1138:LYS:HB3	1.76	0.48
3:C:136:GLU:OE2	3:C:166:GLN:NE2	2.45	0.48
3:C:674:LEU:HD21	3:C:769:THR:HG21	1.95	0.48
3:C:820:HIS:HB3	3:C:920:GLY:O	2.12	0.48
7:G:74:LEU:HD11	7:G:150:THR:HG23	1.95	0.48
8:H:16:MET:HG3	8:H:74:SER:O	2.13	0.48
9:I:68:ASP:HA	9:I:72:GLY:O	2.12	0.48
11:K:29:PRO:HD2	14:N:30:TYR:CD2	2.48	0.48
16:P:59:ASN:O	16:P:65:LEU:HD13	2.13	0.48
2:B:92:ILE:HD13	2:B:109:VAL:HG12	1.94	0.48
2:B:144:ASP:O	2:B:148:LYS:HG2	2.13	0.48
2:B:2888:LEU:O	2:B:3022:PHE:N	2.46	0.48
2:B:3533:LEU:N	2:B:3642:THR:O	2.43	0.48
3:C:426:THR:O	3:C:430:VAL:HG23	2.14	0.48
3:C:446:ILE:HG23	3:C:450:PHE:CZ	2.48	0.48
3:C:818:LEU:HB3	3:C:962:VAL:HG11	1.93	0.48
9:I:26:ASN:HD21	9:I:98:PHE:HB2	1.79	0.48
10:J:20:SER:O	10:J:54:TYR:OH	2.28	0.48
1:A:2287:GLU:N	1:A:2305:ASP:O	2.43	0.48
2:B:13:PHE:O	2:B:17:ARG:HG2	2.13	0.48
2:B:500:GLU:HA	2:B:503:LEU:HD12	1.94	0.48
2:B:968:CYS:O	2:B:972:ILE:HG12	2.14	0.48
2:B:1113:LEU:HA	2:B:1116:PHE:CD1	2.48	0.48
3:C:102:ALA:O	3:C:106:LYS:HE2	2.13	0.48
3:C:358:THR:HB	3:C:361:LYS:HG3	1.94	0.48
3:C:876:ASP:HB2	3:C:877:PRO:HD3	1.94	0.48
3:C:1227:ARG:HG3	3:C:1228:ARG:NH2	2.27	0.48
11:K:48:LEU:HB2	11:K:49:LYS:NZ	2.28	0.48
12:L:68:LYS:H	12:L:68:LYS:HD2	1.77	0.48
2:B:873:THR:O	2:B:876:GLN:HB2	2.13	0.48
2:B:1120:THR:HG21	2:B:1154:GLU:OE1	2.14	0.48
2:B:1271:LEU:O	2:B:1275:GLU:HG2	2.12	0.48
3:C:100:ASN:OD1	3:C:101:PRO:HD3	2.14	0.48
3:C:493:ASP:O	3:C:496:LYS:HG2	2.13	0.48
3:C:1200:GLU:HA	3:C:1203:HIS:CD2	2.48	0.48
3:C:2864:LEU:N	3:C:3023:THR:O	2.45	0.48
6:F:87:TYR:HD1	6:F:100:ILE:HG13	1.79	0.48
2:B:105:ALA:HB3	3:C:20:SER:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:613:ILE:HD12	2:B:616:ARG:HB2	1.96	0.48
2:B:729:LEU:HB3	2:B:737:VAL:HG23	1.95	0.48
2:B:1568:SER:O	2:B:1571:GLU:N	2.44	0.48
3:C:29:GLU:OE2	3:C:33:GLN:NE2	2.46	0.48
3:C:446:ILE:HG23	3:C:450:PHE:HZ	1.78	0.48
3:C:935:VAL:H	3:C:1077:MET:HB2	1.78	0.48
1:A:277:GLU:HG2	1:A:280:GLY:H	1.79	0.48
1:A:4124:TYR:O	1:A:4146:MET:N	2.46	0.48
2:B:228:LEU:HD13	2:B:302:LEU:HD13	1.95	0.48
2:B:469:ALA:O	2:B:473:VAL:HG22	2.13	0.48
2:B:477:ILE:HB	2:B:484:LYS:HB2	1.96	0.48
2:B:1069:THR:OG1	2:B:1070:PRO:HD2	2.13	0.48
3:C:257:SER:O	3:C:261:LYS:HG2	2.13	0.48
3:C:339:LEU:O	3:C:343:MET:HG3	2.13	0.48
8:H:50:ARG:HH22	8:H:56:THR:HG23	1.78	0.48
14:N:102:LEU:HG	15:O:89:GLN:HE21	1.79	0.48
1:A:3468:LYS:O	1:A:3472:THR:N	2.44	0.48
2:B:21:ALA:C	3:C:115:ASP:HB3	2.34	0.48
2:B:615:GLU:HA	2:B:619:TYR:HD2	1.78	0.48
2:B:725:ILE:HD12	2:B:728:CYS:HB3	1.95	0.48
2:B:1106:PHE:CD2	2:B:1171:LEU:HB2	2.48	0.48
2:B:1126:LYS:NZ	2:B:1134:LEU:HD22	2.29	0.48
2:B:1271:LEU:HA	2:B:1274:ILE:HB	1.95	0.48
3:C:276:LYS:O	3:C:278:HIS:N	2.46	0.48
3:C:314:VAL:HA	3:C:317:LEU:HG	1.94	0.48
3:C:818:LEU:HB3	3:C:962:VAL:CG1	2.44	0.48
3:C:1108:LEU:HD21	3:C:1180:ARG:HB2	1.95	0.48
6:F:60:LYS:NZ	6:F:64:GLN:OE1	2.47	0.48
12:L:33:LYS:HZ1	12:L:67:PHE:HE2	1.61	0.48
12:L:81:ASN:HD21	13:M:59:ARG:NE	2.11	0.48
15:O:20:SER:HA	15:O:53:TYR:CE2	2.49	0.48
2:B:56:ASP:HA	2:B:97:HIS:NE2	2.28	0.48
2:B:128:ILE:O	2:B:132:VAL:HG23	2.14	0.48
2:B:156:ASN:HA	2:B:159:ALA:CB	2.44	0.48
2:B:447:THR:OG1	2:B:448:LYS:N	2.46	0.48
2:B:1148:SER:HG	2:B:1214:LEU:CB	2.12	0.48
3:C:160:GLU:O	3:C:164:GLU:HG2	2.14	0.48
14:N:38:ILE:HD11	14:N:124:GLY:HA3	1.96	0.48
2:B:120:HIS:CE1	3:C:119:ILE:HD13	2.48	0.48
2:B:191:ASP:O	2:B:195:VAL:HG13	2.14	0.48
2:B:790:ILE:HG13	2:B:859:TYR:OH	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:885:GLN:HA	2:B:894:ASN:HD21	1.79	0.48
2:B:1318:ILE:HG23	2:B:1345:LEU:HD13	1.96	0.48
3:C:172:PHE:HA	3:C:175:GLU:HB2	1.95	0.48
3:C:603:GLU:HA	3:C:606:LYS:HE2	1.96	0.48
3:C:973:ASP:O	3:C:981:ASP:N	2.47	0.48
7:G:79:VAL:HG23	7:G:144:SER:HB2	1.95	0.48
7:G:124:VAL:HG12	7:G:125:PHE:CE1	2.48	0.48
16:P:6:ILE:HB	16:P:56:VAL:HA	1.95	0.48
1:A:322:GLU:HG3	1:A:339:GLY:O	2.14	0.48
2:B:335:ASN:ND2	2:B:340:LEU:HD13	2.28	0.48
2:B:706:GLU:O	2:B:710:THR:HG23	2.14	0.48
2:B:1147:ILE:C	2:B:1214:LEU:CD1	2.59	0.48
2:B:1256:ASN:OD1	2:B:1257:ILE:HG13	2.13	0.48
3:C:314:VAL:O	3:C:317:LEU:HG	2.13	0.48
3:C:1185:ARG:HA	3:C:1188:ASP:OD2	2.13	0.48
7:G:77:LEU:HD22	7:G:146:ILE:HB	1.95	0.48
1:A:154:PHE:CE1	1:A:234:ILE:HD11	2.49	0.47
2:B:507:ILE:HG22	2:B:543:LYS:HD2	1.96	0.47
2:B:521:PHE:HA	2:B:524:LEU:HB2	1.96	0.47
2:B:1120:THR:O	2:B:1124:ILE:HG13	2.14	0.47
2:B:1329:PRO:HD2	2:B:1332:GLN:OE1	2.14	0.47
3:C:80:PHE:CD2	3:C:90:ASP:HB2	2.49	0.47
7:G:63:THR:O	7:G:66:ARG:HG2	2.14	0.47
14:N:41:LEU:HB3	14:N:45:ARG:CZ	2.44	0.47
1:A:157:LYS:HB2	1:A:159:TYR:HE1	1.80	0.47
1:A:256:ILE:CD1	1:A:322:GLU:HB2	2.41	0.47
2:B:26:LYS:HB2	2:B:29:ILE:HG13	1.95	0.47
2:B:663:LYS:HE3	2:B:666:ASN:HD22	1.79	0.47
2:B:930:ILE:O	2:B:934:ILE:HG12	2.14	0.47
2:B:1102:LEU:HA	2:B:1105:GLN:HG2	1.95	0.47
2:B:1107:ARG:CD	2:B:1190:ILE:HG12	2.41	0.47
2:B:1360:LYS:HG3	2:B:1364:VAL:N	2.28	0.47
3:C:1129:ILE:O	3:C:1201:TYR:OH	2.31	0.47
8:H:58:HIS:HB2	8:H:89:PHE:CZ	2.48	0.47
9:I:29:ASP:OD2	9:I:92:ASN:N	2.42	0.47
9:I:97:MET:HE1	9:I:99:TYR:CE1	2.49	0.47
12:L:81:ASN:HD21	13:M:59:ARG:HE	1.62	0.47
15:O:27:ILE:HD13	15:O:32:SER:OG	2.14	0.47
16:P:28:PHE:CE1	16:P:74:VAL:HG21	2.49	0.47
2:B:136:PRO:HG3	3:C:78:LEU:HD13	1.96	0.47
2:B:156:ASN:HA	2:B:159:ALA:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:433:ILE:HG23	2:B:463:PHE:CE2	2.47	0.47
3:C:1143:ARG:HG2	3:C:1190:LEU:HD11	1.96	0.47
3:C:1180:ARG:HA	3:C:1183:LEU:HD12	1.94	0.47
3:C:3592:ASP:O	3:C:3595:LEU:N	2.47	0.47
9:I:83:TYR:HE2	9:I:85:TYR:HD1	1.61	0.47
2:B:118:LEU:HD12	2:B:162:TYR:CD1	2.49	0.47
2:B:368:ILE:HG12	2:B:371:LYS:HB2	1.96	0.47
2:B:524:LEU:HD13	2:B:611:GLN:HG3	1.96	0.47
2:B:1352:LEU:HB3	2:B:1353:PRO:HD2	1.96	0.47
3:C:256:TRP:HA	3:C:259:GLN:HG3	1.96	0.47
3:C:507:ASN:O	3:C:511:ASP:HB2	2.14	0.47
3:C:1096:TYR:HA	3:C:1099:ASP:OD2	2.15	0.47
3:C:1112:THR:HG23	3:C:1182:LEU:HB3	1.97	0.47
7:G:76:TYR:CE2	7:G:78:ILE:HB	2.50	0.47
7:G:82:GLU:OE1	7:G:82:GLU:N	2.46	0.47
9:I:37:GLU:O	9:I:41:VAL:HG23	2.14	0.47
10:J:15:ASN:HD21	10:J:22:LYS:HB2	1.80	0.47
12:L:41:LEU:HA	12:L:44:GLU:HG3	1.94	0.47
12:L:74:TRP:CE2	12:L:109:LYS:HD3	2.50	0.47
14:N:52:ASP:HB3	14:N:55:ASN:OD1	2.13	0.47
17:T:186:LEU:H	17:T:189:ARG:HD3	1.79	0.47
1:A:317:LYS:HG3	1:A:342:ALA:HB1	1.96	0.47
1:A:4037:ALA:O	1:A:4041:GLY:N	2.41	0.47
2:B:26:LYS:HE2	2:B:72:THR:HG21	1.96	0.47
2:B:126:ASN:HB2	2:B:156:ASN:HD21	1.78	0.47
2:B:137:LEU:HD21	2:B:145:LEU:HD13	1.97	0.47
2:B:653:GLN:H	2:B:757:TRP:HE1	1.62	0.47
2:B:721:ASN:HB3	2:B:777:PHE:HE2	1.78	0.47
2:B:851:LYS:NZ	2:B:854:ASN:OD1	2.47	0.47
2:B:1171:LEU:HG	2:B:1176:VAL:HG23	1.96	0.47
3:C:317:LEU:HD23	3:C:356:TYR:CD2	2.46	0.47
3:C:456:ARG:HG2	3:C:502:LEU:HD11	1.95	0.47
3:C:936:GLN:O	3:C:942:VAL:HA	2.15	0.47
3:C:944:LEU:HD11	3:C:948:LEU:HD12	1.97	0.47
6:F:26:PHE:CE1	6:F:98:LEU:HD11	2.50	0.47
16:P:79:HIS:CG	16:P:93:ILE:HG22	2.50	0.47
17:T:44:LEU:O	17:T:48:GLU:HG2	2.13	0.47
1:A:95:MET:O	1:A:113:ILE:HA	2.14	0.47
1:A:200:ARG:HA	1:A:220:TRP:O	2.13	0.47
1:A:342:ALA:HB2	1:A:346:LEU:HD11	1.96	0.47
1:A:3996:ASP:HA	1:A:4168:ASP:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:524:LEU:HA	2:B:524:LEU:HD23	1.68	0.47
2:B:656:LEU:HB3	2:B:756:ARG:CZ	2.44	0.47
2:B:1145:LYS:CE	2:B:1150:VAL:HG21	2.45	0.47
3:C:51:ASN:HA	3:C:97:ARG:HD2	1.95	0.47
3:C:869:TYR:CG	3:C:869:TYR:O	2.68	0.47
3:C:951:ILE:HG21	3:C:1074:MET:SD	2.54	0.47
3:C:1115:THR:HG21	3:C:1183:LEU:HD23	1.96	0.47
9:I:73:PRO:O	9:I:74:THR:HG22	2.15	0.47
10:J:21:MET:HG2	10:J:54:TYR:CZ	2.50	0.47
11:K:35:ASP:OD1	11:K:36:ILE:N	2.48	0.47
15:O:76:THR:HG22	15:O:78:HIS:H	1.79	0.47
17:T:176:TYR:OH	17:T:199:MET:SD	2.60	0.47
1:A:196:PRO:N	1:A:197:PRO:HD2	2.30	0.47
1:A:208:MET:SD	1:A:266:TYR:OH	2.66	0.47
2:B:157:TYR:H	2:B:180:LYS:CE	2.27	0.47
2:B:271:PHE:HA	2:B:275:GLN:OE1	2.15	0.47
2:B:439:LEU:CD2	2:B:530:LEU:HA	2.45	0.47
2:B:505:SER:O	2:B:509:GLN:HG3	2.15	0.47
2:B:697:THR:O	2:B:701:ILE:HG13	2.15	0.47
2:B:854:ASN:HA	2:B:857:LYS:HE2	1.95	0.47
2:B:969:LEU:O	2:B:972:ILE:HB	2.15	0.47
2:B:1040:CYS:HA	2:B:1043:LYS:HD2	1.97	0.47
2:B:1057:LEU:O	2:B:1091:VAL:HG11	2.15	0.47
3:C:464:PHE:O	3:C:468:GLN:HG2	2.13	0.47
3:C:535:ASN:O	3:C:545:SER:HA	2.15	0.47
3:C:663:ILE:HG21	3:C:698:GLU:OE1	2.14	0.47
3:C:903:GLN:HE21	3:C:994:GLU:CD	2.18	0.47
8:H:59:CYS:HB2	8:H:88:LEU:HD13	1.96	0.47
10:J:13:PRO:HG2	10:J:79:PHE:HB3	1.96	0.47
17:T:51:SER:O	17:T:55:ILE:HG12	2.14	0.47
1:A:3894:VAL:O	1:A:3898:LEU:N	2.39	0.47
2:B:1073:ILE:HG23	2:B:1078:ILE:HD12	1.97	0.47
3:C:459:LYS:HD3	3:C:510:PHE:CG	2.50	0.47
3:C:688:PHE:O	3:C:692:ILE:HG13	2.15	0.47
3:C:948:LEU:HD22	3:C:1010:LYS:HD3	1.97	0.47
3:C:1006:ILE:O	3:C:1009:THR:OG1	2.26	0.47
3:C:1105:ARG:NH1	3:C:1175:ASP:HB2	2.30	0.47
8:H:35:CYS:SG	8:H:40:GLU:HB3	2.55	0.47
1:A:220:TRP:CE2	2:B:956:LEU:HD13	2.50	0.47
2:B:473:VAL:O	2:B:484:LYS:HD2	2.15	0.47
2:B:1303:ASN:O	2:B:1307:ASN:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:331:THR:HG22	3:C:333:GLN:H	1.78	0.47
2:B:117:LEU:CD1	3:C:146:ILE:HG13	2.43	0.47
2:B:813:ASP:C	2:B:1075:TRP:HE1	2.15	0.47
2:B:917:ILE:HG12	2:B:983:CYS:HB3	1.97	0.47
2:B:1146:VAL:CG1	2:B:1215:GLN:HG3	2.42	0.47
3:C:177:ARG:HE	3:C:259:GLN:CA	2.27	0.47
3:C:213:PHE:O	3:C:217:ILE:HG12	2.15	0.47
3:C:321:GLU:OE2	3:C:321:GLU:N	2.48	0.47
3:C:1107:LEU:HD13	3:C:1156:VAL:HG22	1.97	0.47
3:C:1209:LEU:O	3:C:1213:LYS:HG2	2.15	0.47
3:C:3203:PRO:O	3:C:3204:ALA:CB	2.63	0.47
8:H:31:ALA:HB2	8:H:44:PHE:CD2	2.50	0.47
12:L:22:ARG:HD2	12:L:95:PHE:CE2	2.50	0.47
1:A:2955:MET:O	1:A:2959:LYS:N	2.47	0.46
1:A:3817:ASN:O	1:A:3821:ALA:N	2.41	0.46
2:B:164:LEU:HD22	2:B:165:LEU:HD22	1.96	0.46
2:B:443:GLU:O	2:B:444:LEU:HD23	2.16	0.46
2:B:856:TRP:O	2:B:860:ASN:ND2	2.48	0.46
2:B:1126:LYS:NZ	2:B:1138:LYS:HB3	2.30	0.46
2:B:1154:GLU:CD	2:B:1204:VAL:HG11	2.35	0.46
3:C:601:PRO:HG3	3:C:697:ARG:HB3	1.96	0.46
3:C:751:LEU:HD13	3:C:869:TYR:O	2.14	0.46
14:N:32:SER:CA	14:N:35:GLN:HB3	2.38	0.46
14:N:57:ASN:HD22	14:N:58:GLN:NE2	2.13	0.46
14:N:68:ARG:O	14:N:72:LYS:HG2	2.16	0.46
16:P:84:HIS:HB3	16:P:89:VAL:HG21	1.96	0.46
1:A:283:THR:HG23	2:B:955:PHE:HE1	1.79	0.46
1:A:329:ASP:H	1:A:334:ARG:HH11	1.62	0.46
1:A:4077:LEU:O	1:A:4102:HIS:N	2.47	0.46
2:B:605:LYS:HB3	2:B:611:GLN:HB3	1.96	0.46
2:B:1285:GLU:CG	2:B:1290:LEU:HB2	2.44	0.46
2:B:1311:MET:O	2:B:1362:TYR:HE1	1.98	0.46
2:B:4412:GLN:O	2:B:4414:TRP:N	2.49	0.46
2:B:4548:TYR:HA	2:B:4557:TYR:HA	1.97	0.46
3:C:937:LEU:HD12	3:C:940:ASP:O	2.15	0.46
3:C:1145:GLU:O	3:C:1148:GLU:N	2.48	0.46
12:L:36:ARG:HD2	12:L:37:GLN:N	2.31	0.46
2:B:157:TYR:H	2:B:180:LYS:HE2	1.80	0.46
2:B:1302:MET:HA	2:B:1305:LEU:HD12	1.97	0.46
3:C:365:LEU:HA	3:C:368:LYS:HZ1	1.80	0.46
3:C:477:ASN:ND2	3:C:528:LEU:HA	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:854:GLU:HA	3:C:857:ARG:HB2	1.97	0.46
6:F:60:LYS:HA	6:F:63:ILE:HG22	1.96	0.46
14:N:35:GLN:O	14:N:38:ILE:HG22	2.15	0.46
2:B:91:VAL:HG13	2:B:108:VAL:HB	1.97	0.46
2:B:613:ILE:HD11	2:B:619:TYR:HB2	1.96	0.46
2:B:1255:GLU:OE1	2:B:1255:GLU:N	2.48	0.46
3:C:80:PHE:CD1	3:C:87:LYS:HB3	2.51	0.46
3:C:874:HIS:CD2	3:C:881:GLU:HG3	2.50	0.46
3:C:896:GLN:O	3:C:900:ASN:HB2	2.15	0.46
9:I:89:VAL:HG11	9:I:94:LEU:HD22	1.98	0.46
1:A:32:THR:HG22	1:A:34:ILE:HG12	1.96	0.46
1:A:2077:TYR:N	1:A:2123:GLN:O	2.43	0.46
2:B:173:MET:CE	2:B:218:LEU:HA	2.45	0.46
2:B:786:SER:O	2:B:790:ILE:HG12	2.15	0.46
2:B:2631:GLY:O	2:B:2645:LEU:N	2.42	0.46
3:C:940:ASP:O	3:C:941:LYS:HE2	2.15	0.46
3:C:1111:LEU:HG	3:C:1153:PHE:CD1	2.51	0.46
12:L:81:ASN:O	13:M:60:ASN:N	2.48	0.46
1:A:345:TRP:O	1:A:346:LEU:HD23	2.16	0.46
2:B:28:LYS:HD3	2:B:73:PHE:CD1	2.51	0.46
2:B:122:ASN:HB2	2:B:159:ALA:HB2	1.98	0.46
2:B:633:ILE:HA	2:B:636:TYR:HD2	1.81	0.46
2:B:670:LYS:HD3	2:B:670:LYS:HA	1.69	0.46
2:B:718:ILE:HD13	2:B:769:SER:HB3	1.98	0.46
2:B:1121:LYS:NZ	2:B:1200:ILE:HD12	2.31	0.46
2:B:1236:PHE:HA	2:B:1239:GLU:OE1	2.14	0.46
2:B:1328:LYS:CG	2:B:1332:GLN:HG2	2.45	0.46
2:B:1577:ARG:O	2:B:1579:ASP:N	2.45	0.46
3:C:24:LYS:NZ	3:C:29:GLU:HB2	2.30	0.46
3:C:25:ASP:HB2	3:C:28:VAL:HG23	1.97	0.46
3:C:568:ARG:HD2	3:C:572:ILE:HG13	1.97	0.46
3:C:972:TRP:O	3:C:975:GLN:HG2	2.15	0.46
7:G:99:ILE:HG23	7:G:103:ILE:HG13	1.97	0.46
12:L:58:VAL:HG23	12:L:76:CYS:SG	2.55	0.46
1:A:26:ILE:HG13	1:A:323:SER:OG	2.16	0.46
1:A:248:ILE:HG22	1:A:301:TRP:HD1	1.79	0.46
2:B:593:LYS:HA	2:B:596:ARG:HG2	1.97	0.46
2:B:2446:GLY:O	2:B:2675:SER:N	2.43	0.46
3:C:326:PRO:HG2	3:C:372:GLN:OE1	2.15	0.46
3:C:786:GLN:HA	3:C:789:LYS:HG2	1.97	0.46
3:C:1187:TRP:O	3:C:1190:LEU:HB3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:33:LYS:O	12:L:36:ARG:HG3	2.16	0.46
14:N:70:LYS:O	14:N:73:ARG:HG3	2.16	0.46
15:O:24:VAL:HG22	15:O:49:GLN:HE22	1.81	0.46
2:B:66:GLY:O	2:B:72:THR:HA	2.16	0.46
2:B:419:PHE:HA	2:B:422:ARG:CD	2.46	0.46
2:B:540:LEU:O	2:B:544:HIS:N	2.45	0.46
2:B:913:PHE:HB2	2:B:916:GLU:HA	1.97	0.46
3:C:488:PHE:O	3:C:492:ILE:HG12	2.15	0.46
3:C:814:SER:CA	3:C:901:SER:HB3	2.45	0.46
6:F:85:TYR:CE2	6:F:87:TYR:HB2	2.50	0.46
11:K:34:ASP:N	14:N:36:LYS:HA	2.31	0.46
16:P:28:PHE:CE2	16:P:74:VAL:HG21	2.50	0.46
16:P:79:HIS:CD2	16:P:93:ILE:HG22	2.51	0.46
1:A:39:LEU:HD11	2:B:964:GLU:O	2.15	0.46
1:A:177:LEU:HD13	1:A:239:TRP:HH2	1.81	0.46
1:A:1721:LYS:O	1:A:1725:GLY:N	2.45	0.46
2:B:104:VAL:O	2:B:108:VAL:HG22	2.16	0.46
2:B:207:ILE:HG23	2:B:211:LEU:HD23	1.97	0.46
2:B:883:ASN:ND2	2:B:972:ILE:HD13	2.31	0.46
3:C:434:PRO:O	3:C:438:THR:N	2.49	0.46
3:C:1060:GLU:O	3:C:1063:GLU:HG3	2.15	0.46
3:C:1105:ARG:NH2	3:C:1176:GLU:HB2	2.31	0.46
3:C:3744:ARG:O	3:C:3748:ARG:N	2.43	0.46
8:H:24:VAL:HG11	8:H:77:ILE:HD13	1.97	0.46
8:H:71:PHE:CD1	8:H:76:TYR:HB2	2.51	0.46
9:I:46:ILE:O	9:I:50:SER:HB3	2.16	0.46
1:A:7:TRP:CD1	1:A:315:VAL:HG13	2.51	0.46
1:A:2638:ALA:HB2	1:A:2875:ALA:HB1	1.97	0.46
2:B:160:GLN:HE22	2:B:243:LEU:HD13	1.80	0.46
3:C:269:LYS:CE	3:C:284:ARG:HD3	2.46	0.46
3:C:1058:ILE:O	3:C:1062:ILE:HG13	2.16	0.46
3:C:1182:LEU:CD1	3:C:1185:ARG:HE	2.28	0.46
8:H:42:ALA:HB2	8:H:61:VAL:HG22	1.98	0.46
10:J:28:GLN:HG3	10:J:49:PHE:CE2	2.51	0.46
11:K:40:ALA:O	11:K:44:THR:HG22	2.16	0.46
13:M:57:VAL:HG22	13:M:82:LEU:HD22	1.97	0.46
1:A:10:LEU:HD21	1:A:329:ASP:OD2	2.16	0.45
2:B:60:ASN:HD21	3:C:141:ARG:HE	1.64	0.45
2:B:155:ASN:N	2:B:180:LYS:HZ1	2.13	0.45
2:B:292:LEU:O	2:B:295:LEU:HG	2.16	0.45
2:B:437:ASN:O	2:B:441:LYS:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1246:PHE:CE2	2:B:1257:ILE:HG12	2.51	0.45
2:B:1268:TYR:HB3	2:B:1305:LEU:CD2	2.46	0.45
3:C:21:LEU:HD12	3:C:22:GLN:HB2	1.97	0.45
3:C:81:THR:HG22	3:C:126:ASN:H	1.81	0.45
3:C:1111:LEU:HG	3:C:1153:PHE:HB2	1.98	0.45
3:C:3355:GLN:O	3:C:3356:VAL:C	2.51	0.45
3:C:3378:ALA:C	3:C:3380:ILE:H	2.20	0.45
14:N:101:CYS:C	14:N:102:LEU:HD12	2.36	0.45
2:B:49:PHE:O	2:B:53:ILE:HG13	2.17	0.45
2:B:1102:LEU:HD12	2:B:1103:VAL:N	2.32	0.45
2:B:1189:GLN:HE21	2:B:1190:ILE:HG13	1.81	0.45
3:C:58:GLN:HB3	3:C:68:ILE:HG23	1.99	0.45
3:C:274:ARG:HH11	3:C:275:HIS:CD2	2.35	0.45
3:C:1142:ILE:O	3:C:1146:GLN:HG3	2.17	0.45
9:I:32:GLY:O	9:I:35:LEU:HB2	2.17	0.45
11:K:34:ASP:HB2	14:N:36:LYS:HB3	1.98	0.45
13:M:33:GLN:OE1	13:M:36:GLN:NE2	2.38	0.45
3:C:57:TYR:HD1	3:C:69:LYS:HE2	1.81	0.45
3:C:177:ARG:HH21	3:C:259:GLN:HG2	1.80	0.45
3:C:264:ASP:HA	3:C:267:ILE:HD12	1.98	0.45
3:C:821:LEU:HD23	3:C:922:ASN:HB3	1.98	0.45
3:C:1264:LYS:HD3	3:C:1264:LYS:HA	1.66	0.45
8:H:24:VAL:HA	8:H:49:PHE:CZ	2.52	0.45
17:T:103:SER:OG	17:T:107:LYS:HE3	2.15	0.45
2:B:159:ALA:O	2:B:162:TYR:HB3	2.16	0.45
2:B:392:ASP:OD1	2:B:393:ALA:N	2.49	0.45
2:B:591:TRP:CZ2	2:B:595:LEU:HD11	2.52	0.45
2:B:752:ILE:CD1	2:B:765:PHE:HB3	2.45	0.45
2:B:1320:PHE:HA	2:B:1323:ASN:HB2	1.98	0.45
3:C:151:ILE:O	3:C:152:GLN:NE2	2.50	0.45
3:C:253:ILE:HG22	3:C:311:LYS:HE2	1.99	0.45
3:C:3180:CYS:CB	3:C:3366:ALA:HB1	2.47	0.45
6:F:11:LEU:HD21	6:F:34:LYS:HE2	1.98	0.45
10:J:42:ILE:O	10:J:46:ILE:HG13	2.17	0.45
14:N:32:SER:HA	14:N:35:GLN:CB	2.39	0.45
17:T:31:PRO:HA	17:T:197:PHE:CZ	2.51	0.45
1:A:80:LEU:H	1:A:80:LEU:HD12	1.82	0.45
1:A:1338:GLU:O	1:A:1341:TRP:N	2.50	0.45
2:B:103:ASN:ND2	3:C:21:LEU:O	2.49	0.45
2:B:134:GLN:HB2	3:C:79:PHE:HZ	1.81	0.45
2:B:164:LEU:HD23	2:B:168:ILE:CG1	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:394:TYR:HE2	2:B:412:LEU:HD13	1.81	0.45
2:B:756:ARG:HA	2:B:762:ILE:HD13	1.97	0.45
2:B:836:ILE:HA	2:B:839:LEU:HG	1.97	0.45
2:B:1147:ILE:HB	2:B:1214:LEU:CD1	2.47	0.45
3:C:55:ALA:O	3:C:93:VAL:HG12	2.16	0.45
3:C:58:GLN:HA	3:C:90:ASP:CG	2.36	0.45
3:C:177:ARG:NH2	3:C:255:ASN:O	2.50	0.45
3:C:807:GLU:O	3:C:811:LYS:HG2	2.17	0.45
3:C:1115:THR:HB	3:C:1186:ASN:HD22	1.80	0.45
3:C:2932:GLU:O	3:C:2935:LEU:N	2.42	0.45
6:F:67:LEU:HG	7:G:99:ILE:HG12	1.98	0.45
14:N:31:PRO:HB3	14:N:110:TYR:O	2.16	0.45
17:T:115:LYS:HG3	17:T:176:TYR:CZ	2.51	0.45
1:A:166:GLY:HA2	1:A:171:ARG:N	2.28	0.45
2:B:279:LYS:HB3	2:B:286:ASN:HB2	1.97	0.45
2:B:419:PHE:CD2	2:B:422:ARG:HD2	2.51	0.45
2:B:1227:ASP:O	2:B:1231:LYS:HG2	2.16	0.45
2:B:1345:LEU:O	2:B:1349:ILE:HG13	2.16	0.45
3:C:51:ASN:O	3:C:96:LEU:HD12	2.16	0.45
3:C:576:TYR:CG	3:C:624:PHE:HE1	2.35	0.45
3:C:792:GLU:HA	3:C:795:ILE:HD12	1.99	0.45
3:C:793:GLN:O	3:C:796:ILE:N	2.49	0.45
3:C:871:LEU:HD12	3:C:871:LEU:O	2.16	0.45
3:C:1055:PHE:CE1	3:C:1089:ALA:HB1	2.51	0.45
11:K:31:GLU:HA	14:N:32:SER:CB	2.47	0.45
1:A:175:ASN:HB3	1:A:198:ASP:C	2.36	0.45
1:A:287:PHE:C	1:A:318:PRO:HB3	2.36	0.45
1:A:1338:GLU:O	1:A:1342:GLN:N	2.45	0.45
1:A:1826:GLN:O	1:A:1829:SER:N	2.50	0.45
1:A:2920:GLN:O	1:A:2924:MET:N	2.41	0.45
1:A:3996:ASP:HA	1:A:4168:ASP:O	2.17	0.45
2:B:40:LYS:HA	2:B:43:VAL:HG22	1.98	0.45
2:B:230:GLU:OE2	2:B:346:GLU:HG3	2.17	0.45
2:B:236:ASN:HA	2:B:239:ASP:OD2	2.17	0.45
2:B:901:ASP:HB2	2:B:903:ARG:NH1	2.32	0.45
3:C:786:GLN:HB3	3:C:790:LYS:NZ	2.31	0.45
3:C:1018:SER:HA	3:C:1021:THR:HG23	1.99	0.45
3:C:1125:PRO:HG2	3:C:1128:ASP:HB2	1.97	0.45
10:J:59:HIS:CD2	10:J:92:LYS:HB3	2.52	0.45
11:K:47:ALA:HA	11:K:50:LYS:CE	2.47	0.45
2:B:1814:SER:O	2:B:1817:TRP:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:535:ASN:CB	3:C:568:ARG:HH12	2.28	0.45
3:C:656:TYR:O	3:C:660:VAL:HG22	2.16	0.45
3:C:822:PRO:HG3	3:C:920:GLY:HA3	1.97	0.45
3:C:3343:HIS:C	3:C:3345:LYS:H	2.15	0.45
8:H:24:VAL:HG11	8:H:77:ILE:HG21	1.99	0.45
8:H:50:ARG:NH1	8:H:56:THR:HA	2.31	0.45
8:H:50:ARG:NH2	8:H:57:TRP:O	2.50	0.45
11:K:96:ILE:O	11:K:106:LEU:HD12	2.17	0.45
2:B:184:SER:HA	2:B:192:LYS:HE2	1.98	0.45
2:B:186:THR:HG22	2:B:188:PRO:HD2	1.99	0.45
2:B:553:GLN:NE2	2:B:557:GLN:HB2	2.32	0.45
2:B:914:ASP:HB2	2:B:915:PRO:HD3	1.98	0.45
2:B:1136:ASP:OD2	2:B:1218:GLU:HA	2.16	0.45
2:B:1146:VAL:HG12	2:B:1214:LEU:HD11	1.11	0.45
2:B:1282:ASN:HA	2:B:1285:GLU:OE1	2.16	0.45
2:B:1313:ASP:O	2:B:1317:LEU:HG	2.17	0.45
3:C:572:ILE:HG23	3:C:576:TYR:CE2	2.52	0.45
8:H:81:VAL:HG23	8:H:86:ILE:HD13	1.99	0.45
11:K:37:LEU:CB	14:N:36:LYS:HD2	2.45	0.45
12:L:61:VAL:HG13	12:L:67:PHE:CD2	2.52	0.45
14:N:112:SER:HB2	14:N:125:ILE:HG22	1.98	0.45
15:O:33:GLN:HB2	15:O:103:ILE:HG21	1.99	0.45
1:A:114:LEU:HA	1:A:120:GLN:O	2.16	0.45
1:A:222:PHE:HB2	2:B:952:PRO:CB	2.34	0.45
1:A:334:ARG:HA	1:A:354:VAL:HG23	1.97	0.45
2:B:154:PHE:CZ	3:C:161:GLN:HB3	2.52	0.45
2:B:517:ILE:HG13	2:B:518:TYR:N	2.32	0.45
2:B:583:PRO:HD3	2:B:682:LYS:NZ	2.32	0.45
2:B:1137:LYS:HB3	2:B:1215:GLN:HE21	1.81	0.45
3:C:21:LEU:HD12	3:C:22:GLN:N	2.32	0.45
3:C:231:ARG:HA	3:C:249:ARG:HH21	1.81	0.45
9:I:89:VAL:CG2	9:I:108:PHE:HB2	2.47	0.45
13:M:4:GLU:N	13:M:4:GLU:OE1	2.48	0.45
15:O:77:ASN:HB3	15:O:107:TYR:CZ	2.52	0.45
1:A:223:THR:HG22	2:B:955:PHE:HB3	1.98	0.44
1:A:290:ASP:OD1	1:A:291:SER:N	2.49	0.44
2:B:55:GLN:NE2	2:B:57:ASN:HB3	2.32	0.44
2:B:63:TRP:O	2:B:88:GLY:HA2	2.17	0.44
2:B:504:ALA:CB	2:B:539:GLU:HG3	2.47	0.44
2:B:1317:LEU:HD13	16:P:77:LEU:CB	2.35	0.44
2:B:2500:LEU:O	2:B:2504:GLN:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1178:ASP:O	3:C:1182:LEU:HB2	2.17	0.44
10:J:72:TYR:CD2	10:J:77:PHE:HB2	2.52	0.44
1:A:3437:ASP:O	1:A:3441:ILE:N	2.44	0.44
2:B:135:ASN:HA	2:B:138:ASN:HD22	1.82	0.44
2:B:853:GLN:HA	2:B:856:TRP:HD1	1.82	0.44
2:B:1046:ASN:HB2	2:B:1170:LYS:NZ	2.33	0.44
3:C:933:VAL:HG11	3:C:944:LEU:HD13	1.99	0.44
3:C:1234:GLY:HA3	3:C:1252:PHE:HE2	1.83	0.44
11:K:24:ALA:HB1	11:K:99:TYR:O	2.17	0.44
1:A:18:PRO:O	1:A:21:ARG:HB2	2.17	0.44
2:B:559:GLN:NE2	2:B:629:ILE:HG23	2.33	0.44
2:B:749:LYS:NZ	2:B:768:LYS:HE2	2.32	0.44
2:B:841:LYS:O	2:B:844:LEU:HB2	2.18	0.44
2:B:875:ILE:HB	2:B:962:PHE:HZ	1.81	0.44
2:B:1118:GLU:OE2	2:B:1200:ILE:HG13	2.18	0.44
3:C:744:ILE:HG21	3:C:756:ILE:HD11	1.99	0.44
6:F:23:TYR:O	6:F:35:ARG:HA	2.17	0.44
9:I:46:ILE:HD11	9:I:99:TYR:CE2	2.52	0.44
16:P:25:LEU:HB2	16:P:55:ILE:CD1	2.47	0.44
2:B:349:ASN:HA	2:B:352:ILE:HG22	1.99	0.44
2:B:1175:ASN:HA	2:B:1178:ILE:HD12	1.98	0.44
2:B:1214:LEU:HG	2:B:1215:GLN:H	1.83	0.44
3:C:32:PHE:O	3:C:38:LYS:HE2	2.17	0.44
3:C:80:PHE:O	3:C:88:ILE:HG13	2.18	0.44
3:C:429:LYS:HA	3:C:432:ASP:OD2	2.17	0.44
3:C:675:ILE:HD12	3:C:772:TRP:CH2	2.52	0.44
3:C:745:LYS:HZ1	3:C:756:ILE:HD13	1.82	0.44
11:K:79:PHE:HE1	11:K:108:TYR:HH	1.64	0.44
12:L:95:PHE:CD1	12:L:106:LEU:HB2	2.52	0.44
14:N:29:PHE:HE1	14:N:34:ILE:HG12	1.82	0.44
1:A:276:PHE:CE2	1:A:284:ASN:HB2	2.51	0.44
1:A:2525:ASN:O	1:A:2529:SER:CB	2.66	0.44
2:B:64:VAL:HG23	2:B:77:GLN:NE2	2.33	0.44
2:B:1149:ASP:H	2:B:1214:LEU:CD2	2.26	0.44
2:B:1271:LEU:HD21	2:B:1301:CYS:CB	2.45	0.44
3:C:55:ALA:HB3	3:C:93:VAL:CG1	2.48	0.44
3:C:139:TYR:HA	3:C:142:GLN:HG2	1.99	0.44
3:C:210:GLU:HG3	3:C:280:ASN:CG	2.37	0.44
3:C:853:VAL:HG23	3:C:854:GLU:N	2.33	0.44
3:C:2738:GLU:O	3:C:2742:ALA:N	2.49	0.44
7:G:63:THR:O	7:G:67:ILE:HG12	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:49:ASN:HB3	9:I:54:LEU:HB2	1.99	0.44
11:K:32:CYS:HB3	14:N:36:LYS:HE2	2.00	0.44
11:K:34:ASP:HA	11:K:37:LEU:HB3	1.99	0.44
1:A:79:PRO:HD2	1:A:121:TRP:CZ3	2.52	0.44
1:A:174:PHE:C	1:A:199:PRO:HA	2.38	0.44
2:B:52:PHE:HD1	2:B:58:SER:HB2	1.82	0.44
2:B:174:LEU:CD2	2:B:236:ASN:HB3	2.47	0.44
2:B:204:THR:HG22	2:B:208:LYS:HE3	2.00	0.44
2:B:368:ILE:O	2:B:372:GLU:N	2.51	0.44
2:B:436:PHE:CZ	2:B:499:LEU:HD13	2.53	0.44
2:B:440:GLU:OE1	2:B:441:LYS:NZ	2.50	0.44
3:C:56:TYR:CD1	3:C:80:PHE:HZ	2.36	0.44
3:C:794:LEU:O	3:C:798:VAL:HG23	2.18	0.44
3:C:981:ASP:OD1	3:C:982:LYS:N	2.48	0.44
3:C:3343:HIS:O	3:C:3345:LYS:CB	2.66	0.44
1:A:2044:TYR:HA	1:A:2085:PRO:HA	2.00	0.44
1:A:4114:PRO:O	1:A:4116:ASP:N	2.51	0.44
2:B:309:ASP:HA	2:B:358:PHE:HE2	1.81	0.44
2:B:789:LYS:HD3	2:B:842:GLU:OE1	2.17	0.44
2:B:962:PHE:HA	2:B:966:LYS:HE2	2.00	0.44
2:B:1146:VAL:CG1	2:B:1215:GLN:CG	2.91	0.44
2:B:1215:GLN:HB3	2:B:1218:GLU:CG	2.47	0.44
6:F:87:TYR:HH	6:F:98:LEU:HD13	1.82	0.44
7:G:118:ASP:HB3	7:G:120:THR:HG23	1.99	0.44
8:H:61:VAL:HG12	8:H:86:ILE:HG13	1.99	0.44
11:K:42:ARG:HG3	11:K:43:GLU:N	2.33	0.44
11:K:90:HIS:NE2	11:K:95:PHE:HB2	2.32	0.44
14:N:46:LEU:O	14:N:47:LYS:HG2	2.17	0.44
17:T:132:THR:OG1	17:T:133:ALA:N	2.50	0.44
1:A:2943:LYS:O	1:A:2947:ASN:N	2.43	0.44
2:B:134:GLN:O	2:B:137:LEU:HB2	2.18	0.44
2:B:729:LEU:HD22	2:B:737:VAL:HB	2.00	0.44
2:B:1259:ASN:OD1	2:B:1260:ALA:N	2.51	0.44
3:C:3354:ILE:O	3:C:3357:ALA:C	2.53	0.44
6:F:60:LYS:O	6:F:63:ILE:HG22	2.17	0.44
15:O:11:GLU:O	15:O:15:LYS:HG3	2.18	0.44
16:P:52:ASN:OD1	16:P:52:ASN:N	2.51	0.44
17:T:107:LYS:HD2	17:T:177:ARG:HG2	2.00	0.44
1:A:12:GLN:HE22	1:A:338:PHE:HE1	1.66	0.44
1:A:276:PHE:HB2	1:A:282:ARG:HB2	2.00	0.44
2:B:116:ASN:ND2	2:B:162:TYR:OH	2.41	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:127:GLU:HG3	3:C:51:ASN:HB2	1.99	0.44
2:B:380:LEU:HD21	2:B:427:LEU:HD12	2.00	0.44
2:B:561:ILE:HG12	2:B:566:LYS:HD3	2.00	0.44
2:B:813:ASP:CG	2:B:1075:TRP:NE1	2.72	0.44
2:B:876:GLN:OE1	2:B:966:LYS:HB3	2.18	0.44
2:B:1146:VAL:HG11	2:B:1215:GLN:CD	2.36	0.44
3:C:46:SER:HA	3:C:106:LYS:HZ1	1.83	0.44
3:C:239:PRO:O	3:C:243:LEU:HG	2.18	0.44
6:F:15:SER:HA	6:F:23:TYR:CE1	2.53	0.44
9:I:85:TYR:CE1	9:I:106:LEU:HD22	2.53	0.44
1:A:60:LEU:HD22	1:A:69:TRP:CZ2	2.53	0.43
1:A:212:PRO:HG2	1:A:235:GLU:OE2	2.18	0.43
1:A:341:TRP:CZ2	2:B:963:PHE:CG	3.06	0.43
1:A:343:ASN:HD21	2:B:931:ARG:NE	2.11	0.43
2:B:790:ILE:HD11	2:B:839:LEU:HB2	2.00	0.43
2:B:3748:ARG:O	2:B:3751:ALA:HB3	2.18	0.43
3:C:528:LEU:O	3:C:532:ILE:HG13	2.18	0.43
3:C:622:ASN:O	3:C:625:PRO:HD2	2.18	0.43
12:L:98:LEU:HG	12:L:100:PRO:HD2	2.00	0.43
16:P:83:TYR:CD1	16:P:88:VAL:HA	2.53	0.43
17:T:107:LYS:CB	17:T:177:ARG:HG2	2.48	0.43
1:A:1399:CYS:HA	1:A:1524:ARG:C	2.39	0.43
1:A:2434:LEU:O	1:A:2438:GLY:N	2.48	0.43
2:B:50:GLN:OE1	2:B:50:GLN:N	2.41	0.43
2:B:115:ASN:HB2	2:B:120:HIS:HB2	2.00	0.43
2:B:566:LYS:HG3	2:B:567:GLN:H	1.83	0.43
2:B:1127:ASN:HB2	2:B:1147:ILE:HD11	2.00	0.43
3:C:85:LEU:HG	3:C:87:LYS:N	2.32	0.43
3:C:557:LYS:HB2	3:C:557:LYS:HE3	1.77	0.43
3:C:591:LYS:HB2	3:C:609:TRP:CE3	2.53	0.43
12:L:61:VAL:HG13	12:L:67:PHE:CE2	2.53	0.43
1:A:51:ILE:HA	1:A:82:ARG:CG	2.47	0.43
2:B:99:LEU:HD12	2:B:99:LEU:HA	1.75	0.43
2:B:109:VAL:HG13	3:C:122:GLU:O	2.19	0.43
2:B:154:PHE:O	2:B:158:VAL:HG23	2.18	0.43
3:C:123:ILE:HD11	3:C:134:LEU:CD1	2.48	0.43
3:C:550:HIS:O	3:C:553:GLN:HG3	2.18	0.43
3:C:570:ASN:O	3:C:573:LEU:HG	2.17	0.43
8:H:50:ARG:HH12	8:H:56:THR:HG23	1.82	0.43
13:M:43:TYR:O	13:M:47:LYS:HD3	2.19	0.43
16:P:43:PHE:HE2	16:P:57:LYS:HG2	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:164:HIS:CE1	1:A:201:GLY:HA3	2.53	0.43
1:A:222:PHE:O	1:A:222:PHE:CD1	2.70	0.43
1:A:4077:LEU:N	1:A:4102:HIS:O	2.51	0.43
2:B:358:PHE:HA	2:B:361:LYS:NZ	2.33	0.43
2:B:801:ILE:HG21	2:B:874:ALA:CB	2.47	0.43
2:B:1748:ASP:O	2:B:1751:GLY:N	2.46	0.43
3:C:132:ASN:ND2	3:C:169:SER:O	2.51	0.43
6:F:8:ASP:O	6:F:12:LYS:HG2	2.18	0.43
9:I:27:SER:OG	9:I:96:PHE:HB3	2.18	0.43
12:L:45:ASN:HD21	12:L:52:ASP:HB3	1.83	0.43
12:L:60:PHE:O	12:L:64:GLN:NE2	2.51	0.43
1:A:904:LEU:O	1:A:908:LEU:N	2.51	0.43
1:A:1399:CYS:HA	1:A:1524:ARG:O	2.19	0.43
2:B:200:ILE:HD11	2:B:256:ILE:HG21	2.00	0.43
2:B:434:VAL:O	2:B:438:LYS:HE2	2.18	0.43
2:B:872:SER:O	2:B:876:GLN:HG2	2.18	0.43
2:B:904:LEU:HD11	2:B:990:PHE:CE2	2.52	0.43
3:C:933:VAL:CG2	3:C:944:LEU:HB3	2.49	0.43
3:C:960:THR:O	3:C:964:ARG:HG2	2.19	0.43
3:C:992:ASP:O	3:C:996:VAL:HG22	2.17	0.43
3:C:3355:GLN:N	3:C:3358:ILE:CB	2.82	0.43
6:F:26:PHE:CD1	6:F:98:LEU:HD11	2.53	0.43
11:K:34:ASP:HB3	14:N:40:GLU:CB	2.37	0.43
1:A:154:PHE:C	1:A:156:GLY:H	2.21	0.43
1:A:397:PHE:O	1:A:405:GLU:HA	2.18	0.43
2:B:154:PHE:CE1	3:C:161:GLN:HB3	2.54	0.43
2:B:340:LEU:HD11	2:B:397:TYR:OH	2.18	0.43
2:B:367:LEU:HB2	2:B:372:GLU:HA	1.99	0.43
2:B:657:LYS:CB	2:B:748:VAL:HB	2.48	0.43
2:B:852:LYS:HB3	2:B:856:TRP:NE1	2.34	0.43
2:B:890:PHE:CE2	2:B:891:ILE:HG12	2.53	0.43
2:B:958:GLU:HB3	2:B:962:PHE:HE2	1.82	0.43
2:B:1138:LYS:O	2:B:1139:LEU:HD23	2.19	0.43
3:C:591:LYS:HG2	3:C:606:LYS:HA	2.00	0.43
3:C:675:ILE:HD12	3:C:772:TRP:HH2	1.84	0.43
9:I:90:GLN:O	9:I:93:THR:OG1	2.26	0.43
11:K:28:TRP:HA	11:K:29:PRO:HA	1.68	0.43
11:K:30:PRO:HG3	14:N:33:LYS:HZ3	1.82	0.43
16:P:12:LYS:HD2	16:P:12:LYS:C	2.39	0.43
17:T:140:LEU:HB3	17:T:145:TYR:HD2	1.83	0.43
2:B:15:ILE:HD11	2:B:33:LEU:HD21	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:299:PHE:CD1	2:B:302:LEU:HD12	2.50	0.43
2:B:385:ASP:O	2:B:389:LYS:HG2	2.19	0.43
2:B:428:HIS:CD2	2:B:428:HIS:N	2.86	0.43
2:B:875:ILE:HB	2:B:962:PHE:CE1	2.54	0.43
3:C:102:ALA:O	3:C:106:LYS:HG2	2.19	0.43
3:C:183:MET:HB3	3:C:216:TRP:CE2	2.54	0.43
3:C:269:LYS:HA	3:C:269:LYS:HD3	1.87	0.43
3:C:434:PRO:O	3:C:438:THR:HG23	2.17	0.43
3:C:686:VAL:HG11	3:C:689:ASP:HB2	2.00	0.43
3:C:1147:ALA:O	3:C:1151:MET:HG2	2.18	0.43
11:K:29:PRO:CG	14:N:30:TYR:H	2.29	0.43
11:K:48:LEU:HB2	11:K:49:LYS:HZ2	1.82	0.43
12:L:81:ASN:HB3	13:M:60:ASN:ND2	2.33	0.43
15:O:37:THR:HG22	15:O:38:TYR:H	1.84	0.43
15:O:37:THR:HG22	15:O:38:TYR:N	2.34	0.43
1:A:270:GLY:HA2	1:A:288:VAL:O	2.19	0.43
1:A:1758:LEU:N	1:A:1797:LEU:O	2.47	0.43
2:B:128:ILE:O	2:B:131:PRO:HD2	2.18	0.43
2:B:161:VAL:HG22	2:B:164:LEU:HD13	2.00	0.43
2:B:305:SER:OG	2:B:307:PRO:HD2	2.19	0.43
2:B:503:LEU:HD11	2:B:533:ARG:NH2	2.32	0.43
2:B:661:LEU:H	2:B:661:LEU:HD12	1.84	0.43
2:B:1057:LEU:HD22	2:B:1091:VAL:HG13	2.00	0.43
2:B:1270:LYS:HA	2:B:1270:LYS:HD2	1.67	0.43
2:B:1350:LYS:O	2:B:1357:ARG:NH2	2.47	0.43
2:B:2779:PHE:O	2:B:2783:PHE:N	2.50	0.43
3:C:80:PHE:CE1	3:C:87:LYS:HB3	2.54	0.43
3:C:339:LEU:HA	3:C:339:LEU:HD23	1.86	0.43
3:C:542:ILE:CG2	3:C:575:ASN:HB2	2.46	0.43
3:C:859:VAL:HA	3:C:975:GLN:NE2	2.29	0.43
3:C:3177:ASN:HA	3:C:3370:LEU:CB	2.49	0.43
6:F:14:LEU:O	6:F:17:LEU:HB2	2.18	0.43
8:H:64:ASN:OD1	8:H:64:ASN:N	2.51	0.43
9:I:60:CYS:HA	9:I:77:CYS:SG	2.59	0.43
11:K:30:PRO:HD3	14:N:33:LYS:HE2	2.00	0.43
16:P:58:VAL:CG2	16:P:65:LEU:HD11	2.48	0.43
17:T:49:LYS:HA	17:T:52:GLU:CD	2.39	0.43
1:A:48:ASP:HA	1:A:51:ILE:CG1	2.49	0.43
1:A:79:PRO:HD3	1:A:112:TYR:CZ	2.54	0.43
1:A:208:MET:CG	1:A:296:ILE:HG21	2.49	0.43
2:B:11:GLU:HB3	2:B:33:LEU:HD13	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:156:ASN:O	2:B:159:ALA:N	2.52	0.43
2:B:540:LEU:HB3	2:B:544:HIS:NE2	2.34	0.43
2:B:1308:LEU:HD23	2:B:1362:TYR:OH	2.19	0.43
2:B:1318:ILE:HG23	2:B:1345:LEU:CD1	2.49	0.43
3:C:252:LYS:HG2	3:C:256:TRP:CZ2	2.54	0.43
3:C:789:LYS:HB3	3:C:789:LYS:HE3	1.77	0.43
3:C:971:ASN:H	3:C:974:GLN:NE2	2.17	0.43
6:F:67:LEU:HD13	6:F:67:LEU:HA	1.90	0.43
7:G:63:THR:HA	7:G:66:ARG:NE	2.33	0.43
8:H:15:ASP:HB2	8:H:76:TYR:HB3	1.99	0.43
17:T:31:PRO:HA	17:T:197:PHE:HZ	1.83	0.43
1:A:89:ALA:N	1:A:96:LEU:O	2.46	0.43
2:B:110:VAL:HG12	3:C:122:GLU:CG	2.49	0.43
2:B:499:LEU:O	2:B:503:LEU:HG	2.18	0.43
2:B:802:ILE:HG12	2:B:877:THR:CG2	2.45	0.43
2:B:837:GLN:O	2:B:840:VAL:HG22	2.19	0.43
2:B:1136:ASP:HA	2:B:1218:GLU:HG2	1.39	0.43
2:B:1153:VAL:HG13	2:B:1157:ARG:NH1	2.34	0.43
2:B:1219:THR:HG23	2:B:1290:LEU:HD21	2.00	0.43
3:C:17:ILE:HD12	3:C:32:PHE:HZ	1.83	0.43
3:C:743:LYS:HZ2	3:C:795:ILE:HD13	1.84	0.43
3:C:1183:LEU:O	3:C:1187:TRP:CD1	2.72	0.43
6:F:38:LYS:HA	6:F:41:SER:O	2.18	0.43
10:J:28:GLN:HG3	10:J:49:PHE:CD2	2.54	0.43
11:K:33:ALA:CA	14:N:36:LYS:HD3	2.49	0.43
16:P:12:LYS:HD2	16:P:13:GLN:N	2.34	0.43
17:T:102:SER:HA	17:T:105:GLN:OE1	2.19	0.43
1:A:320:PRO:HG2	1:A:341:TRP:HB3	2.01	0.42
2:B:1115:ASP:HA	2:B:1118:GLU:HG2	2.02	0.42
2:B:2402:ILE:O	2:B:2405:ILE:N	2.52	0.42
3:C:86:GLU:OE2	3:C:87:LYS:HG2	2.19	0.42
3:C:531:PHE:HE2	3:C:538:ARG:HE	1.67	0.42
3:C:1226:PHE:HZ	3:C:1256:TYR:HB3	1.84	0.42
6:F:66:ASP:O	6:F:67:LEU:HD22	2.19	0.42
10:J:77:PHE:CZ	10:J:88:LEU:HD11	2.54	0.42
15:O:41:ASP:OD2	15:O:42:LYS:N	2.52	0.42
16:P:5:TYR:CD1	16:P:57:LYS:HE2	2.55	0.42
17:T:107:LYS:HD3	17:T:178:ARG:HA	2.01	0.42
2:B:380:LEU:CD2	2:B:427:LEU:HA	2.48	0.42
2:B:459:ILE:HG12	2:B:502:ARG:HD2	2.01	0.42
3:C:862:LEU:CD1	3:C:972:TRP:HE1	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:36:HIS:O	6:F:39:SER:OG	2.36	0.42
7:G:76:TYR:O	7:G:88:GLY:HA2	2.20	0.42
8:H:68:PHE:HD2	9:I:64:LYS:HE3	1.84	0.42
9:I:89:VAL:HG23	9:I:108:PHE:HB2	2.01	0.42
11:K:32:CYS:O	14:N:32:SER:OG	2.36	0.42
14:N:67:LEU:O	14:N:71:ILE:HD12	2.18	0.42
1:A:48:ASP:OD1	1:A:51:ILE:HD11	2.19	0.42
1:A:225:GLN:OE1	1:A:253:LEU:HG	2.19	0.42
1:A:276:PHE:HB2	1:A:282:ARG:CB	2.49	0.42
1:A:343:ASN:ND2	2:B:931:ARG:HE	2.13	0.42
2:B:26:LYS:HB3	2:B:28:LYS:HG2	2.01	0.42
2:B:348:CYS:HA	2:B:351:ILE:HD12	2.01	0.42
2:B:1121:LYS:HD3	2:B:1203:ARG:HG2	2.01	0.42
3:C:609:TRP:CZ2	3:C:613:LEU:HD11	2.54	0.42
3:C:819:VAL:CG1	3:C:909:MET:HG2	2.47	0.42
3:C:916:LYS:HB2	3:C:1073:ALA:HB1	2.02	0.42
3:C:951:ILE:HG21	3:C:1074:MET:HE1	2.02	0.42
7:G:127:ARG:CG	7:G:129:GLN:HE22	2.29	0.42
9:I:95:LEU:HD12	9:I:107:ILE:HD11	2.01	0.42
11:K:33:ALA:CB	14:N:39:LYS:HD3	2.49	0.42
11:K:49:LYS:HA	11:K:49:LYS:HD3	1.91	0.42
12:L:35:ILE:HD13	12:L:96:PHE:CE2	2.54	0.42
12:L:47:GLN:CD	12:L:48:GLY:H	2.22	0.42
17:T:186:LEU:HA	17:T:189:ARG:CG	2.49	0.42
1:A:3777:ASP:O	1:A:3781:TYR:N	2.46	0.42
2:B:337:PRO:N	2:B:338:PRO:HD2	2.34	0.42
2:B:349:ASN:O	2:B:352:ILE:HG22	2.20	0.42
2:B:391:LYS:HZ3	2:B:420:LEU:HD22	1.83	0.42
2:B:1034:ASN:HB2	2:B:1035:PRO:HD3	2.00	0.42
3:C:132:ASN:CB	3:C:169:SER:HB2	2.50	0.42
3:C:135:MET:HG3	3:C:165:PHE:CE2	2.54	0.42
3:C:315:LYS:HA	3:C:315:LYS:HD3	1.74	0.42
3:C:1185:ARG:HH12	3:C:1189:ILE:HD13	1.84	0.42
6:F:85:TYR:CD2	6:F:100:ILE:HG23	2.55	0.42
7:G:132:LEU:H	7:G:132:LEU:HD23	1.85	0.42
9:I:37:GLU:HB3	9:I:70:LYS:NZ	2.34	0.42
13:M:12:MET:SD	13:M:16:MET:HG3	2.59	0.42
16:P:25:LEU:HD22	16:P:103:MET:SD	2.59	0.42
1:A:2360:GLY:N	1:A:2490:PHE:O	2.50	0.42
2:B:123:SER:CB	3:C:96:LEU:HD21	2.49	0.42
2:B:853:GLN:HA	2:B:856:TRP:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:986:PHE:HD1	2:B:989:ARG:HH21	1.67	0.42
2:B:1536:GLU:O	2:B:1539:ARG:N	2.53	0.42
3:C:362:MET:HE3	3:C:365:LEU:HB3	2.00	0.42
3:C:628:VAL:O	3:C:628:VAL:HG12	2.20	0.42
3:C:1160:TYR:CZ	3:C:1176:GLU:HG2	2.55	0.42
3:C:1183:LEU:O	3:C:1187:TRP:HD1	2.02	0.42
3:C:3726:VAL:O	3:C:3730:LEU:N	2.44	0.42
14:N:61:GLU:O	14:N:65:LEU:HD23	2.19	0.42
15:O:30:ASP:C	15:O:33:GLN:HE21	2.22	0.42
16:P:28:PHE:CG	16:P:74:VAL:HG11	2.54	0.42
18:V:221:UNK:O	18:V:222:UNK:C	2.68	0.42
2:B:389:LYS:HA	2:B:392:ASP:OD2	2.19	0.42
2:B:504:ALA:HB1	2:B:539:GLU:HG3	2.02	0.42
2:B:813:ASP:OD1	2:B:1075:TRP:CD1	2.73	0.42
2:B:1179:THR:HA	2:B:1183:THR:HG22	2.00	0.42
2:B:1229:PHE:HA	2:B:1232:GLU:HG2	2.01	0.42
3:C:409:LEU:HD11	3:C:461:ILE:HA	2.00	0.42
3:C:568:ARG:HD2	3:C:568:ARG:O	2.19	0.42
3:C:3503:TRP:O	3:C:3506:GLN:N	2.52	0.42
12:L:27:ALA:HB3	12:L:30:LEU:HD13	2.00	0.42
14:N:29:PHE:CE1	14:N:34:ILE:HG12	2.54	0.42
15:O:25:PHE:CD2	15:O:50:ILE:HD11	2.54	0.42
1:A:52:ALA:HB3	1:A:53:PRO:HD3	2.02	0.42
1:A:145:PRO:HD2	1:A:171:ARG:HH12	1.85	0.42
2:B:64:VAL:HG22	2:B:83:LYS:NZ	2.33	0.42
2:B:164:LEU:HG	2:B:175:PRO:HA	2.02	0.42
2:B:394:TYR:CE2	2:B:412:LEU:HD13	2.55	0.42
3:C:132:ASN:HB3	3:C:169:SER:HB2	2.02	0.42
3:C:278:HIS:HB2	3:C:282:ARG:CD	2.49	0.42
3:C:315:LYS:HA	3:C:318:THR:HG23	2.02	0.42
3:C:812:THR:O	3:C:816:VAL:HG23	2.20	0.42
10:J:47:LYS:NZ	10:J:58:TRP:O	2.53	0.42
1:A:35:MET:HB3	1:A:58:PHE:HB2	2.01	0.42
1:A:2203:ALA:HB2	1:A:3956:ALA:HA	2.02	0.42
2:B:1137:LYS:HD3	2:B:1144:MET:HG2	2.00	0.42
2:B:1494:VAL:O	2:B:1498:TYR:N	2.53	0.42
3:C:327:LEU:HA	3:C:376:ASN:OD1	2.20	0.42
3:C:677:ARG:HA	3:C:723:PHE:HE1	1.83	0.42
3:C:745:LYS:HA	3:C:745:LYS:HD3	1.72	0.42
3:C:1105:ARG:HH22	3:C:1176:GLU:HB2	1.84	0.42
3:C:3540:TRP:O	3:C:3544:LYS:N	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:23:TYR:HD1	6:F:36:HIS:CG	2.38	0.42
9:I:41:VAL:O	9:I:62:TYR:HE2	2.02	0.42
9:I:43:GLN:HA	9:I:46:ILE:HD12	2.00	0.42
1:A:63:THR:O	1:A:66:ASN:HB2	2.20	0.42
1:A:288:VAL:CG1	1:A:290:ASP:H	2.31	0.42
2:B:248:LEU:HD23	2:B:280:LYS:HZ3	1.83	0.42
2:B:376:ALA:O	2:B:380:LEU:CB	2.68	0.42
2:B:418:SER:HA	2:B:421:GLU:OE1	2.20	0.42
3:C:23:LEU:HD23	3:C:24:LYS:O	2.18	0.42
3:C:679:ASP:OD1	3:C:679:ASP:N	2.51	0.42
3:C:910:LYS:HE3	3:C:998:VAL:HB	2.01	0.42
3:C:1116:LYS:HA	3:C:1116:LYS:HD2	1.64	0.42
7:G:99:ILE:HD13	7:G:99:ILE:HA	1.87	0.42
10:J:13:PRO:HD2	10:J:79:PHE:O	2.20	0.42
10:J:92:LYS:HD2	10:J:92:LYS:HA	1.88	0.42
13:M:24:ALA:HA	13:M:41:ILE:HD11	2.02	0.42
1:A:46:TYR:OH	1:A:104:SER:HB3	2.19	0.42
1:A:53:PRO:C	1:A:82:ARG:HB3	2.40	0.42
2:B:36:GLN:HB3	2:B:39:ASP:HB2	2.02	0.42
2:B:352:ILE:HA	2:B:352:ILE:HD12	1.78	0.42
2:B:796:ASN:HA	2:B:799:VAL:HG22	2.01	0.42
2:B:1208:LYS:O	2:B:1212:ILE:HG13	2.19	0.42
3:C:431:ALA:O	3:C:434:PRO:HD2	2.19	0.42
3:C:928:LYS:N	3:C:929:PRO:HD2	2.35	0.42
3:C:3353:ARG:C	3:C:3354:ILE:O	2.53	0.42
8:H:39:LYS:HB2	8:H:39:LYS:HE2	1.88	0.42
1:A:952:LYS:O	1:A:956:GLU:N	2.35	0.41
2:B:169:LYS:HZ1	3:C:150:LYS:HD2	1.84	0.41
2:B:651:SER:OG	2:B:673:PHE:HB3	2.20	0.41
2:B:1045:PRO:HG2	2:B:1050:PHE:CE1	2.55	0.41
2:B:1308:LEU:HD21	2:B:1359:PHE:CE2	2.55	0.41
3:C:572:ILE:HG23	3:C:576:TYR:HE2	1.85	0.41
3:C:804:ASN:OD1	3:C:808:ASN:ND2	2.52	0.41
3:C:871:LEU:HB2	3:C:873:PRO:O	2.19	0.41
3:C:3232:ILE:O	3:C:3233:ILE:C	2.59	0.41
11:K:87:GLN:O	11:K:88:ALA:HB2	2.20	0.41
1:A:1226:LEU:O	1:A:1230:ALA:HB2	2.20	0.41
2:B:801:ILE:HD13	2:B:874:ALA:C	2.40	0.41
2:B:835:GLN:OE1	2:B:838:LYS:HB3	2.20	0.41
2:B:875:ILE:HD12	2:B:962:PHE:HZ	1.84	0.41
2:B:880:LEU:HA	2:B:883:ASN:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3652:GLY:O	2:B:3655:GLU:N	2.53	0.41
3:C:89:GLN:OE1	3:C:126:ASN:ND2	2.52	0.41
3:C:1035:ILE:H	3:C:1035:ILE:HG13	1.66	0.41
8:H:73:ARG:O	8:H:75:TYR:HD1	2.03	0.41
11:K:56:GLU:HB2	11:K:59:LYS:HD3	2.02	0.41
1:A:60:LEU:HD11	1:A:67:CYS:CB	2.39	0.41
1:A:3629:LEU:O	1:A:3631:GLN:N	2.53	0.41
2:B:156:ASN:C	2:B:159:ALA:H	2.23	0.41
2:B:324:ILE:HG23	2:B:397:TYR:CE1	2.55	0.41
2:B:387:CYS:HB3	2:B:391:LYS:HZ3	1.85	0.41
2:B:422:ARG:CD	2:B:478:MET:HA	2.50	0.41
2:B:618:GLU:O	2:B:622:VAL:HG23	2.20	0.41
2:B:1314:ALA:HA	16:P:76:SER:HA	2.00	0.41
2:B:2563:LYS:N	2:B:2601:ILE:O	2.52	0.41
3:C:31:SER:OG	3:C:69:LYS:O	2.34	0.41
3:C:451:ASP:O	3:C:455:ARG:HG2	2.20	0.41
3:C:621:ILE:HG22	3:C:641:TYR:HD2	1.85	0.41
3:C:744:ILE:HD11	3:C:795:ILE:HD11	2.02	0.41
8:H:11:ILE:HA	8:H:79:LEU:HB2	2.02	0.41
12:L:16:LEU:HD13	12:L:19:HIS:CE1	2.56	0.41
13:M:15:ASP:OD1	13:M:16:MET:N	2.52	0.41
14:N:100:LYS:HD3	15:O:89:GLN:NE2	2.35	0.41
17:T:115:LYS:HE3	17:T:115:LYS:HB3	1.90	0.41
2:B:160:GLN:NE2	2:B:243:LEU:HD13	2.35	0.41
2:B:1065:SER:HA	2:B:1084:LYS:HE3	2.02	0.41
2:B:1340:ASP:OD1	2:B:1343:LYS:HB3	2.19	0.41
2:B:3466:ALA:O	2:B:3469:ARG:N	2.53	0.41
3:C:26:MET:O	3:C:26:MET:HE3	2.20	0.41
3:C:1213:LYS:O	3:C:1217:LYS:HG2	2.20	0.41
3:C:3784:GLU:O	3:C:3787:ASP:N	2.53	0.41
9:I:41:VAL:HG12	9:I:63:ILE:HD12	2.02	0.41
14:N:100:LYS:HD3	15:O:89:GLN:HE22	1.85	0.41
15:O:85:ILE:HG13	15:O:98:ILE:CG2	2.50	0.41
1:A:154:PHE:CZ	1:A:234:ILE:HD11	2.56	0.41
1:A:257:MET:HE3	1:A:267:PHE:H	1.85	0.41
1:A:288:VAL:N	1:A:318:PRO:HB3	2.36	0.41
2:B:40:LYS:HB3	2:B:45:ASN:O	2.21	0.41
2:B:173:MET:HG2	2:B:173:MET:O	2.21	0.41
2:B:217:GLN:O	2:B:220:LYS:HG2	2.20	0.41
2:B:687:PHE:HD1	2:B:692:LEU:HB2	1.85	0.41
2:B:832:ASN:O	2:B:836:ILE:HG12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1360:LYS:HD2	2:B:1363:ASN:CB	2.46	0.41
3:C:106:LYS:HA	3:C:106:LYS:HD3	1.86	0.41
3:C:250:MET:O	3:C:254:THR:OG1	2.28	0.41
3:C:694:GLN:O	3:C:698:GLU:HG3	2.20	0.41
3:C:798:VAL:HG13	3:C:802:ILE:HD12	2.03	0.41
3:C:3740:ILE:O	3:C:3744:ARG:N	2.46	0.41
8:H:63:ARG:HA	8:H:63:ARG:NE	2.35	0.41
11:K:34:ASP:OD1	11:K:37:LEU:HB3	2.20	0.41
12:L:41:LEU:HD11	12:L:56:ASN:CB	2.51	0.41
16:P:16:ASP:OD2	16:P:16:ASP:C	2.58	0.41
1:A:93:ASP:OD1	1:A:94:LYS:HG3	2.21	0.41
2:B:558:VAL:HG13	2:B:595:LEU:HD22	2.03	0.41
2:B:585:ILE:HG21	2:B:644:TRP:HB2	2.02	0.41
2:B:800:LYS:O	2:B:803:GLU:HG3	2.21	0.41
2:B:868:ILE:HG21	2:B:957:GLN:HB3	2.03	0.41
2:B:931:ARG:O	2:B:931:ARG:NH1	2.52	0.41
2:B:1126:LYS:HE3	2:B:1126:LYS:HB3	1.92	0.41
3:C:9:ARG:HE	3:C:45:LEU:HD13	1.86	0.41
3:C:80:PHE:CD1	3:C:80:PHE:N	2.87	0.41
3:C:881:GLU:O	3:C:884:LYS:HG2	2.20	0.41
8:H:73:ARG:NH1	8:H:73:ARG:HG2	2.36	0.41
9:I:37:GLU:HB3	9:I:70:LYS:HZ2	1.85	0.41
14:N:69:GLU:O	14:N:72:LYS:HB2	2.20	0.41
1:A:102:TYR:HD2	1:A:107:ARG:HB2	1.86	0.41
2:B:12:ASP:HA	2:B:15:ILE:HD12	2.03	0.41
2:B:63:TRP:HE3	2:B:89:ILE:O	2.04	0.41
2:B:136:PRO:O	2:B:140:GLN:HB2	2.21	0.41
2:B:266:THR:O	2:B:270:PRO:HD2	2.19	0.41
2:B:721:ASN:HB3	2:B:777:PHE:CE2	2.56	0.41
3:C:140:SER:HA	3:C:162:VAL:HG11	2.03	0.41
3:C:183:MET:HG3	3:C:216:TRP:CG	2.56	0.41
3:C:214:ASN:O	3:C:218:ASN:ND2	2.53	0.41
3:C:354:ARG:HD2	3:C:355:PHE:N	2.36	0.41
3:C:548:LEU:HD12	3:C:548:LEU:HA	1.82	0.41
3:C:984:THR:HA	3:C:987:ASP:OD2	2.21	0.41
1:A:53:PRO:HD2	1:A:82:ARG:HB2	2.01	0.41
1:A:154:PHE:O	1:A:156:GLY:N	2.53	0.41
1:A:170:GLN:OE1	2:B:861:ASP:HB3	2.20	0.41
1:A:268:ILE:O	1:A:291:SER:OG	2.34	0.41
1:A:283:THR:CB	2:B:939:ASN:HB3	2.51	0.41
1:A:283:THR:CG2	2:B:939:ASN:HB3	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:539:GLU:OE1	2:B:542:LYS:HD3	2.20	0.41
2:B:1363:ASN:HA	2:B:1366:VAL:HB	2.03	0.41
3:C:335:ILE:O	3:C:338:THR:HB	2.21	0.41
3:C:405:LEU:HD23	3:C:468:GLN:NE2	2.34	0.41
7:G:73:VAL:HA	7:G:149:GLN:HA	2.02	0.41
8:H:73:ARG:HA	8:H:73:ARG:NE	2.36	0.41
13:M:16:MET:SD	13:M:19:ARG:NH2	2.94	0.41
1:A:21:ARG:HA	1:A:39:LEU:O	2.21	0.41
1:A:146:ARG:HH22	1:A:176:ASP:CG	2.22	0.41
1:A:341:TRP:HH2	2:B:967:GLN:NE2	2.17	0.41
1:A:941:GLU:O	1:A:945:ASP:CB	2.69	0.41
2:B:122:ASN:HB2	2:B:159:ALA:CB	2.51	0.41
2:B:152:GLU:O	2:B:180:LYS:HD2	2.21	0.41
2:B:317:PHE:CE1	2:B:351:ILE:HG12	2.56	0.41
2:B:435:GLN:HA	2:B:438:LYS:CE	2.50	0.41
2:B:444:LEU:HD11	2:B:456:ILE:HD11	2.03	0.41
2:B:715:LEU:HB2	2:B:766:ILE:HD11	2.02	0.41
2:B:765:PHE:CE2	2:B:766:ILE:HG13	2.56	0.41
2:B:931:ARG:HH11	2:B:934:ILE:HB	1.86	0.41
2:B:1044:ILE:O	2:B:1044:ILE:HG22	2.21	0.41
2:B:1113:LEU:HD13	2:B:1164:MET:HE1	2.02	0.41
2:B:1317:LEU:CD2	16:P:32:TRP:HZ3	2.31	0.41
2:B:2385:HIS:O	2:B:2388:ASN:N	2.54	0.41
3:C:151:ILE:H	3:C:151:ILE:HD12	1.85	0.41
3:C:324:ILE:O	3:C:328:TYR:HD2	2.03	0.41
3:C:467:ILE:HG12	3:C:488:PHE:HZ	1.86	0.41
3:C:491:ILE:O	3:C:495:PHE:HB2	2.20	0.41
3:C:875:VAL:HG12	3:C:877:PRO:HD2	2.03	0.41
3:C:1035:ILE:HD13	3:C:1095:GLN:HG2	2.03	0.41
3:C:1062:ILE:O	3:C:1065:ILE:HG23	2.21	0.41
3:C:1084:SER:O	3:C:1088:TRP:CD1	2.74	0.41
8:H:27:VAL:HG21	8:H:52:ARG:HH12	1.85	0.41
8:H:52:ARG:HG3	8:H:53:TYR:CD2	2.56	0.41
8:H:89:PHE:HD2	8:H:91:THR:HG23	1.86	0.41
10:J:41:LYS:HD2	10:J:41:LYS:HA	1.91	0.41
10:J:77:PHE:CE1	10:J:88:LEU:HD11	2.56	0.41
11:K:34:ASP:OD1	11:K:38:GLU:HG2	2.20	0.41
12:L:41:LEU:O	12:L:44:GLU:HG3	2.20	0.41
12:L:52:ASP:O	12:L:56:ASN:ND2	2.54	0.41
12:L:64:GLN:HB3	12:L:66:GLU:HG2	2.02	0.41
13:M:28:VAL:HG21	13:M:77:ILE:CD1	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:43:PHE:CZ	16:P:55:ILE:HG23	2.55	0.41
17:T:49:LYS:NZ	17:T:184:THR:HG23	2.36	0.41
1:A:220:TRP:CG	1:A:221:SER:N	2.89	0.41
1:A:2495:ASP:O	1:A:2497:ARG:N	2.54	0.41
2:B:89:ILE:HD12	2:B:112:GLU:HG2	2.02	0.41
2:B:929:THR:HG22	2:B:930:ILE:N	2.34	0.41
2:B:1214:LEU:HG	2:B:1215:GLN:N	2.36	0.41
2:B:1215:GLN:HB3	2:B:1218:GLU:CB	2.48	0.41
2:B:1240:PHE:HD1	2:B:1243:LYS:HZ1	1.69	0.41
2:B:1243:LYS:HA	2:B:1248:TYR:HE1	1.86	0.41
3:C:56:TYR:HD1	3:C:80:PHE:CZ	2.39	0.41
3:C:989:ILE:HG23	3:C:994:GLU:OE2	2.20	0.41
3:C:1008:GLY:O	3:C:1012:LYS:HG3	2.21	0.41
3:C:1014:ASN:HA	3:C:1017:LEU:HB2	2.03	0.41
3:C:1099:ASP:HA	3:C:1102:LYS:HG2	2.02	0.41
6:F:74:ILE:HG22	6:F:91:GLN:HG2	2.03	0.41
6:F:77:ILE:HG22	6:F:79:LEU:CD2	2.51	0.41
7:G:77:LEU:HD12	7:G:90:PHE:CE2	2.56	0.41
13:M:77:ILE:HG13	13:M:80:LEU:HB2	2.02	0.41
17:T:187:GLU:HB2	17:T:188:PRO:CD	2.51	0.41
1:A:45:ASN:OD1	1:A:48:ASP:N	2.49	0.40
2:B:848:LYS:HD3	2:B:848:LYS:HA	1.83	0.40
2:B:1054:ILE:HD13	2:B:1054:ILE:HA	1.84	0.40
2:B:1108:THR:O	2:B:1111:LYS:HG2	2.21	0.40
2:B:1138:LYS:HE3	2:B:1145:LYS:CD	2.51	0.40
2:B:1353:PRO:HG2	2:B:1356:ILE:HG12	2.03	0.40
3:C:186:GLY:HA2	3:C:212:LYS:NZ	2.36	0.40
3:C:327:LEU:HD21	3:C:372:GLN:HG3	2.03	0.40
3:C:917:LYS:HA	3:C:917:LYS:HD2	1.89	0.40
3:C:1037:LYS:HE3	3:C:1037:LYS:HB3	1.77	0.40
7:G:79:VAL:HG12	7:G:85:VAL:HA	2.04	0.40
15:O:37:THR:O	15:O:39:ASN:ND2	2.54	0.40
16:P:60:ILE:HB	16:P:77:LEU:HD13	2.03	0.40
1:A:195:ASN:N	1:A:196:PRO:CD	2.85	0.40
1:A:252:ASN:HA	1:A:272:SER:O	2.22	0.40
1:A:253:LEU:O	1:A:272:SER:N	2.54	0.40
1:A:3742:GLY:O	1:A:3746:TRP:N	2.51	0.40
2:B:277:GLU:HG2	2:B:285:ALA:HB3	2.04	0.40
2:B:347:ILE:O	2:B:351:ILE:HG13	2.21	0.40
2:B:586:ALA:HB1	2:B:686:TYR:CE2	2.56	0.40
2:B:1057:LEU:HA	2:B:1060:ILE:HD12	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:81:THR:HG22	3:C:126:ASN:N	2.35	0.40
3:C:343:MET:O	3:C:346:ILE:HG22	2.21	0.40
3:C:521:ILE:HD12	3:C:521:ILE:HA	1.95	0.40
3:C:569:TYR:HA	3:C:572:ILE:HD12	2.03	0.40
3:C:601:PRO:CG	3:C:697:ARG:HB3	2.52	0.40
3:C:753:LEU:HB2	3:C:754:PRO:HD3	2.03	0.40
12:L:23:PHE:HE2	12:L:93:LEU:HD23	1.86	0.40
14:N:33:LYS:HA	14:N:36:LYS:HG3	2.03	0.40
1:A:7:TRP:HD1	1:A:315:VAL:HG22	1.85	0.40
1:A:60:LEU:HA	1:A:60:LEU:HD12	1.88	0.40
1:A:287:PHE:CG	1:A:320:PRO:HD3	2.55	0.40
2:B:90:ALA:HB3	2:B:111:VAL:CG2	2.51	0.40
2:B:376:ALA:O	2:B:380:LEU:HB2	2.21	0.40
2:B:653:GLN:HG2	2:B:671:VAL:HG22	2.04	0.40
2:B:788:GLN:HA	2:B:791:HIS:NE2	2.36	0.40
2:B:956:LEU:HD23	2:B:959:ILE:HD12	2.02	0.40
2:B:1264:ILE:HD13	2:B:1264:ILE:HG21	1.87	0.40
3:C:139:TYR:O	3:C:142:GLN:HG2	2.20	0.40
3:C:398:TRP:HB2	3:C:496:LYS:HB2	2.03	0.40
3:C:402:PRO:CA	3:C:468:GLN:HE22	2.35	0.40
3:C:425:ASP:O	3:C:429:LYS:HG2	2.21	0.40
3:C:818:LEU:H	3:C:909:MET:CE	2.34	0.40
3:C:948:LEU:HD21	3:C:1006:ILE:HG23	2.03	0.40
3:C:995:ILE:O	3:C:999:ILE:HG13	2.22	0.40
7:G:108:LYS:HA	7:G:111:ARG:NE	2.36	0.40
8:H:56:THR:N	8:H:92:GLY:O	2.49	0.40
10:J:17:GLU:HB3	10:J:18:MET:SD	2.61	0.40
2:B:314:TYR:CE1	2:B:389:LYS:HB3	2.57	0.40
2:B:444:LEU:HB2	2:B:452:LEU:HD22	2.02	0.40
2:B:444:LEU:CD2	2:B:456:ILE:HG12	2.50	0.40
2:B:477:ILE:HB	2:B:484:LYS:CB	2.52	0.40
2:B:599:ILE:O	2:B:602:PRO:HD2	2.22	0.40
2:B:836:ILE:O	2:B:840:VAL:HG13	2.22	0.40
2:B:851:LYS:CD	2:B:854:ASN:HB3	2.52	0.40
2:B:898:PRO:CG	2:B:1074:SER:HB3	2.43	0.40
2:B:1305:LEU:HA	2:B:1305:LEU:HD23	1.92	0.40
2:B:1311:MET:C	2:B:1362:TYR:CE1	2.95	0.40
3:C:221:SER:OG	3:C:287:GLU:OE1	2.38	0.40
3:C:715:ILE:HG12	18:V:221:UNK:C	2.52	0.40
3:C:1036:LYS:O	3:C:1040:LYS:HG3	2.22	0.40
3:C:1150:ASP:HA	3:C:1153:PHE:HB3	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:29:ASP:O	9:I:92:ASN:HA	2.20	0.40
12:L:22:ARG:HD2	12:L:95:PHE:HE2	1.84	0.40
12:L:37:GLN:HG3	12:L:60:PHE:CE2	2.56	0.40
15:O:34:VAL:HG22	15:O:104:ASN:CG	2.42	0.40
15:O:51:ILE:HD11	15:O:71:ALA:HB2	2.03	0.40
15:O:101:TYR:CZ	15:O:103:ILE:HD11	2.57	0.40
16:P:69:VAL:HG12	16:P:74:VAL:O	2.21	0.40
17:T:175:MET:SD	17:T:176:TYR:N	2.94	0.40
2:B:11:GLU:HB3	2:B:33:LEU:CD1	2.51	0.40
2:B:429:LEU:HD13	2:B:470:PHE:CD2	2.57	0.40
2:B:875:ILE:HD12	2:B:962:PHE:CZ	2.57	0.40
3:C:36:LYS:HA	3:C:39:ASN:HD22	1.87	0.40
3:C:215:GLU:HA	3:C:218:ASN:HD22	1.87	0.40
3:C:420:LYS:HD3	3:C:421:LYS:HZ2	1.86	0.40
3:C:663:ILE:O	3:C:667:LYS:HG3	2.21	0.40
3:C:715:ILE:HD12	3:C:715:ILE:HA	1.75	0.40
3:C:1262:MET:HE3	3:C:1262:MET:O	2.21	0.40
7:G:105:LEU:HA	7:G:108:LYS:HE2	2.04	0.40
8:H:48:ASP:O	8:H:52:ARG:HG2	2.21	0.40
13:M:77:ILE:HG13	13:M:77:ILE:O	2.22	0.40
16:P:30:ALA:HB2	16:P:77:LEU:HD12	2.03	0.40
16:P:39:LEU:HD11	16:P:96:GLN:C	2.41	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	3371/4168 (81%)	2907 (86%)	454 (14%)	10 (0%)	41	77
2	B	4229/4595 (92%)	3790 (90%)	429 (10%)	10 (0%)	47	81
3	C	4232/4620 (92%)	3885 (92%)	337 (8%)	10 (0%)	47	81

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	d	445/667 (67%)	400 (90%)	45 (10%)	0	100	100
5	e	529/670 (79%)	459 (87%)	69 (13%)	1 (0%)	47	81
6	F	96/133 (72%)	82 (85%)	14 (15%)	0	100	100
7	G	93/159 (58%)	81 (87%)	12 (13%)	0	100	100
8	H	83/92 (90%)	81 (98%)	2 (2%)	0	100	100
9	I	87/110 (79%)	79 (91%)	8 (9%)	0	100	100
10	J	82/93 (88%)	77 (94%)	5 (6%)	0	100	100
11	K	93/111 (84%)	81 (87%)	12 (13%)	0	100	100
12	L	95/111 (86%)	90 (95%)	5 (5%)	0	100	100
13	M	84/87 (97%)	82 (98%)	2 (2%)	0	100	100
14	N	107/132 (81%)	99 (92%)	8 (8%)	0	100	100
15	O	109/117 (93%)	103 (94%)	6 (6%)	0	100	100
16	P	101/110 (92%)	94 (93%)	7 (7%)	0	100	100
17	T	127/309 (41%)	109 (86%)	16 (13%)	2 (2%)	9	44
All	All	13963/16284 (86%)	12499 (90%)	1431 (10%)	33 (0%)	50	81

All (33) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	283	THR
1	A	1823	VAL
2	B	1651	ASN
2	B	1652	PRO
2	B	2557	PRO
2	B	3703	PRO
2	B	4008	PRO
2	B	4432	PRO
3	C	2978	PRO
3	C	2979	PRO
3	C	3203	PRO
3	C	3379	GLN
3	C	4182	PRO
3	C	4188	PRO
3	C	4546	PRO
5	e	142	VAL
1	A	1351	ASP
1	A	4084	ILE

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Mol	Chain	Res	Type
2	B	4556	THR
3	C	3204	ALA
2	B	3923	PRO
3	C	3378	ALA
17	T	188	PRO
1	A	982	ILE
1	A	3108	ASN
17	T	129	ASP
2	B	4557	TYR
1	A	1040	VAL
1	A	3665	PRO
2	B	3922	MET
3	C	4121	VAL
1	A	1824	GLY
1	A	3593	GLY

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	291/3691 (8%)	288 (99%)	3 (1%)	76	86
2	B	1215/4145 (29%)	1208 (99%)	7 (1%)	86	92
3	C	1094/4196 (26%)	1091 (100%)	3 (0%)	92	95
4	d	386/609 (63%)	385 (100%)	1 (0%)	92	95
5	e	364/597 (61%)	363 (100%)	1 (0%)	92	95
6	F	87/109 (80%)	85 (98%)	2 (2%)	50	70
7	G	86/149 (58%)	85 (99%)	1 (1%)	71	83
8	H	76/83 (92%)	75 (99%)	1 (1%)	69	81
9	I	76/95 (80%)	76 (100%)	0	100	100
10	J	74/82 (90%)	74 (100%)	0	100	100
11	K	81/97 (84%)	81 (100%)	0	100	100
12	L	86/99 (87%)	86 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
13	M	77/78 (99%)	77 (100%)	0	100	100
14	N	96/119 (81%)	96 (100%)	0	100	100
15	O	98/104 (94%)	96 (98%)	2 (2%)	55	74
16	P	97/104 (93%)	96 (99%)	1 (1%)	76	86
17	T	118/271 (44%)	118 (100%)	0	100	100
All	All	4402/14628 (30%)	4380 (100%)	22 (0%)	89	93

All (22) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	31	LYS
1	A	189	ARG
1	A	282	ARG
2	B	171	LYS
2	B	296	LYS
2	B	450	LYS
2	B	461	LYS
2	B	851	LYS
2	B	1093	ARG
2	B	1126	LYS
3	C	97	ARG
3	C	107	LYS
3	C	1184	ARG
4	d	124	LYS
5	e	1123	SER
6	F	78	ARG
6	F	80	ARG
7	G	91	LYS
8	H	22	LYS
15	O	60	LYS
15	O	90	ASP
16	P	12	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (97) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	12	GLN
1	A	44	ASN
1	A	55	ASN

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Mol	Chain	Res	Type
1	A	184	ASN
1	A	284	ASN
1	A	343	ASN
2	B	45	ASN
2	B	54	GLN
2	B	55	GLN
2	B	60	ASN
2	B	77	GLN
2	B	134	GLN
2	B	138	ASN
2	B	156	ASN
2	B	160	GLN
2	B	167	GLN
2	B	223	ASN
2	B	236	ASN
2	B	322	HIS
2	B	335	ASN
2	B	404	ASN
2	B	437	ASN
2	B	553	GLN
2	B	666	ASN
2	B	724	HIS
2	B	876	GLN
2	B	894	ASN
2	B	922	ASN
2	B	935	ASN
2	B	1034	ASN
2	B	1104	ASN
2	B	1112	ASN
2	B	1175	ASN
2	B	1189	GLN
2	B	1258	ASN
2	B	1321	GLN
2	B	1323	ASN
2	B	1332	GLN
3	C	39	ASN
3	C	51	ASN
3	C	62	GLN
3	C	74	GLN
3	C	89	GLN
3	C	111	GLN
3	C	126	ASN

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Mol	Chain	Res	Type
3	C	152	GLN
3	C	218	ASN
3	C	278	HIS
3	C	350	HIS
3	C	357	ASN
3	C	424	ASN
3	C	468	GLN
3	C	575	ASN
3	C	678	HIS
3	C	741	ASN
3	C	809	ASN
3	C	864	GLN
3	C	971	ASN
3	C	974	GLN
3	C	975	GLN
3	C	1098	GLN
3	C	1186	ASN
3	C	1214	GLN
4	d	164	ASN
4	d	1202	GLN
5	e	52	ASN
5	e	874	ASN
5	e	1141	ASN
5	e	1168	GLN
5	e	1188	ASN
6	F	72	ASN
7	G	70	HIS
7	G	98	ASN
7	G	129	GLN
8	H	36	ASN
9	I	26	ASN
9	I	48	ASN
9	I	76	GLN
10	J	23	ASN
10	J	40	ASN
10	J	59	HIS
10	J	65	HIS
11	K	91	ASN
11	K	93	ASN
12	L	28	GLN
12	L	81	ASN
13	M	26	ASN

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Mol	Chain	Res	Type
13	M	54	ASN
13	M	60	ASN
14	N	55	ASN
14	N	57	ASN
15	O	39	ASN
15	O	44	ASN
15	O	48	GLN
15	O	78	HIS
16	P	79	HIS
17	T	165	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](#)

4 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
19	ADP	C	4703	-	24,29,29	0.96	1 (4%)	29,45,45	1.51	3 (10%)
19	ADP	C	4701	-	24,29,29	0.91	1 (4%)	29,45,45	1.50	5 (17%)
20	ATP	C	4704	-	26,33,33	0.88	1 (3%)	31,52,52	1.68	5 (16%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
19	ADP	C	4702	-	24,29,29	0.92	1 (4%)	29,45,45	1.55	4 (13%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
19	ADP	C	4703	-	-	1/12/32/32	0/3/3/3
19	ADP	C	4701	-	-	3/12/32/32	0/3/3/3
20	ATP	C	4704	-	-	4/18/38/38	0/3/3/3
19	ADP	C	4702	-	-	4/12/32/32	0/3/3/3

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
19	C	4701	ADP	C5-C4	2.20	1.46	1.40
19	C	4702	ADP	C5-C4	2.14	1.46	1.40
19	C	4703	ADP	C5-C4	2.14	1.46	1.40
20	C	4704	ATP	C5-C4	2.06	1.46	1.40

All (17) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	C	4704	ATP	PA-O3A-PB	-5.12	115.24	132.83
19	C	4703	ADP	PA-O3A-PB	-4.58	117.12	132.83
19	C	4701	ADP	PA-O3A-PB	-4.21	118.36	132.83
20	C	4704	ATP	PB-O3B-PG	-4.15	118.57	132.83
19	C	4702	ADP	PA-O3A-PB	-4.13	118.66	132.83
19	C	4702	ADP	N3-C2-N1	-3.58	123.08	128.68
20	C	4704	ATP	N3-C2-N1	-3.58	123.08	128.68
19	C	4701	ADP	N3-C2-N1	-3.55	123.13	128.68
19	C	4703	ADP	N3-C2-N1	-3.21	123.66	128.68
19	C	4702	ADP	C3'-C2'-C1'	3.18	105.77	100.98
19	C	4703	ADP	C4-C5-N7	-2.92	106.36	109.40
19	C	4701	ADP	C3'-C2'-C1'	2.77	105.15	100.98
19	C	4701	ADP	C4-C5-N7	-2.56	106.73	109.40
20	C	4704	ATP	C4-C5-N7	-2.17	107.14	109.40
19	C	4702	ADP	C4-C5-N7	-2.16	107.14	109.40
20	C	4704	ATP	N6-C6-N1	2.15	123.04	118.57
19	C	4701	ADP	O3B-PB-O2B	2.09	115.64	107.64

There are no chirality outliers.

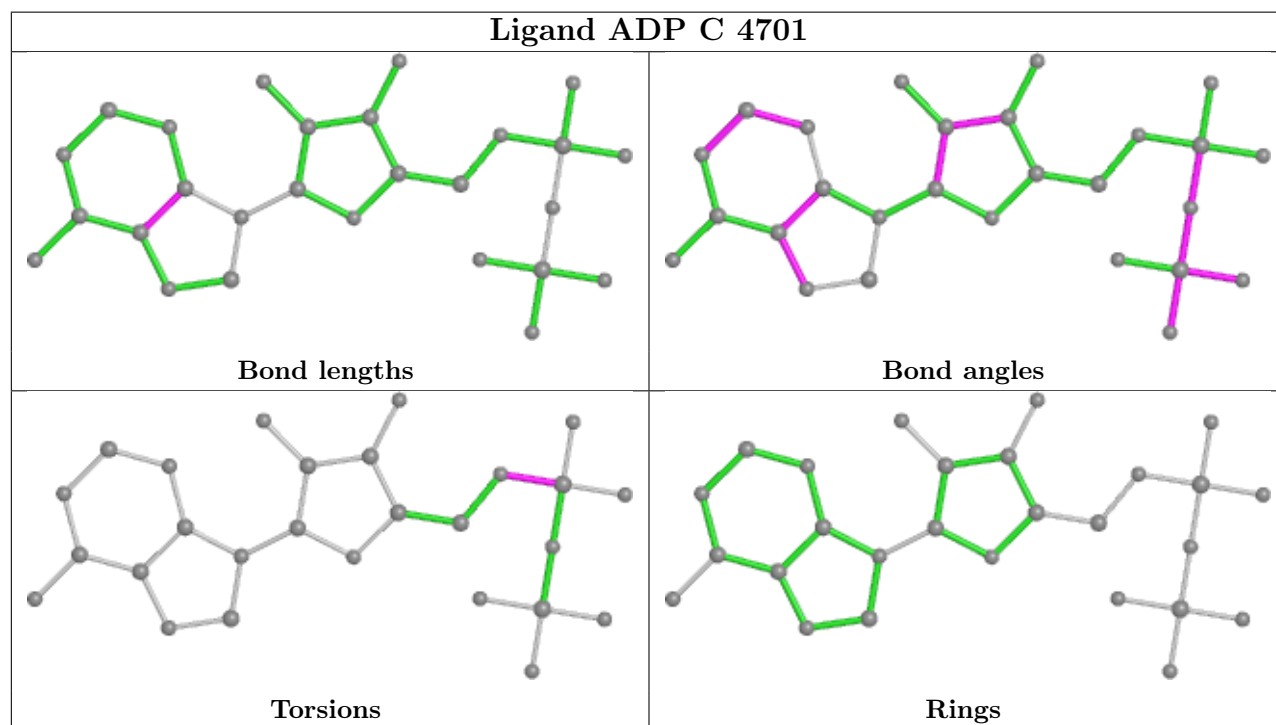
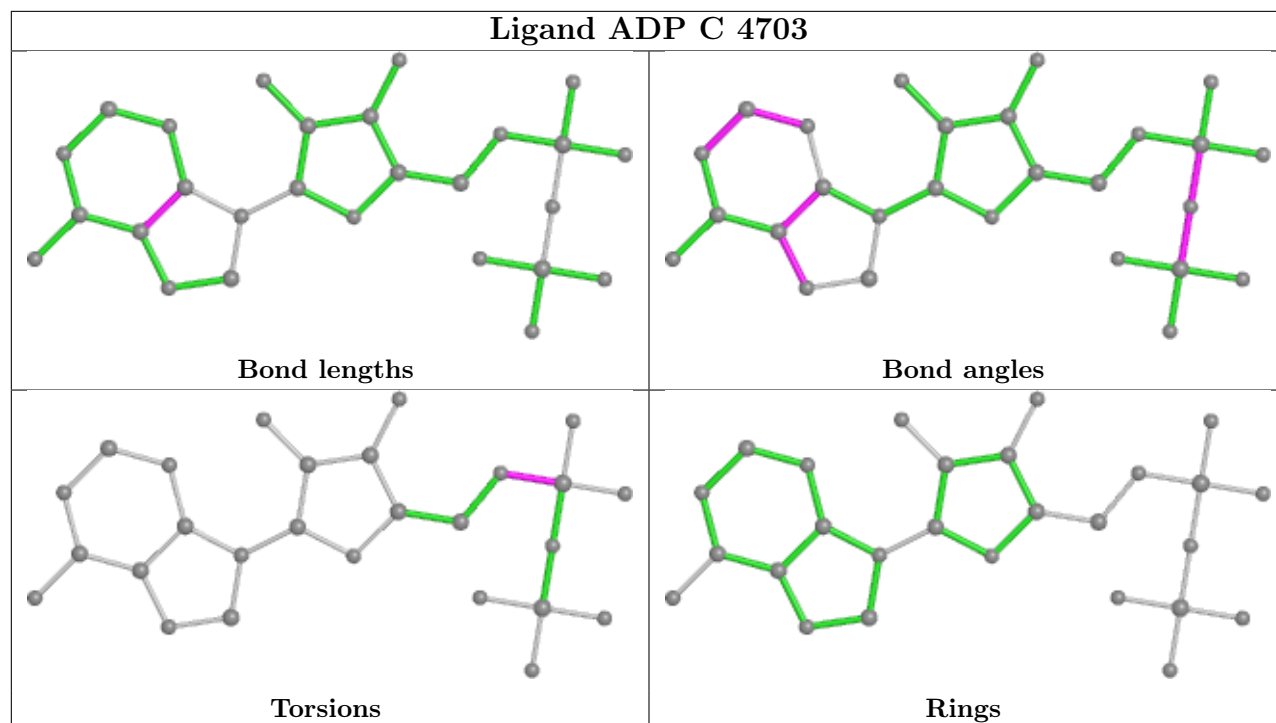
All (12) torsion outliers are listed below:

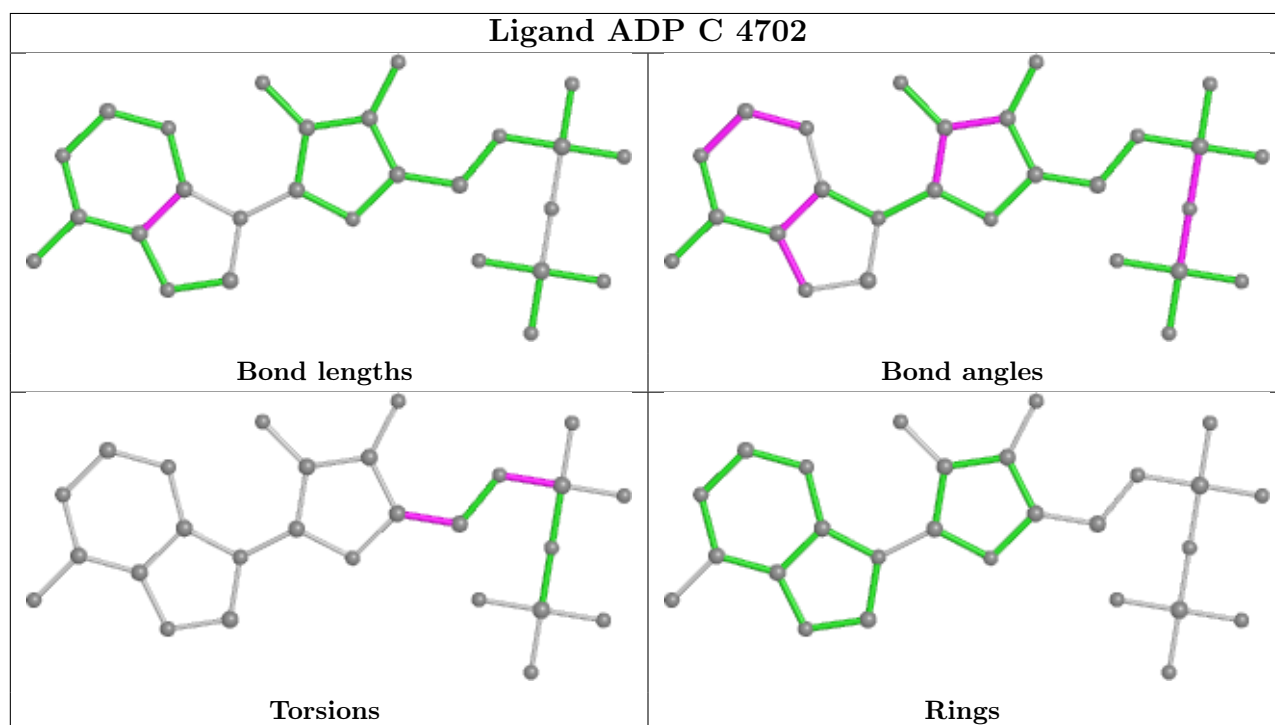
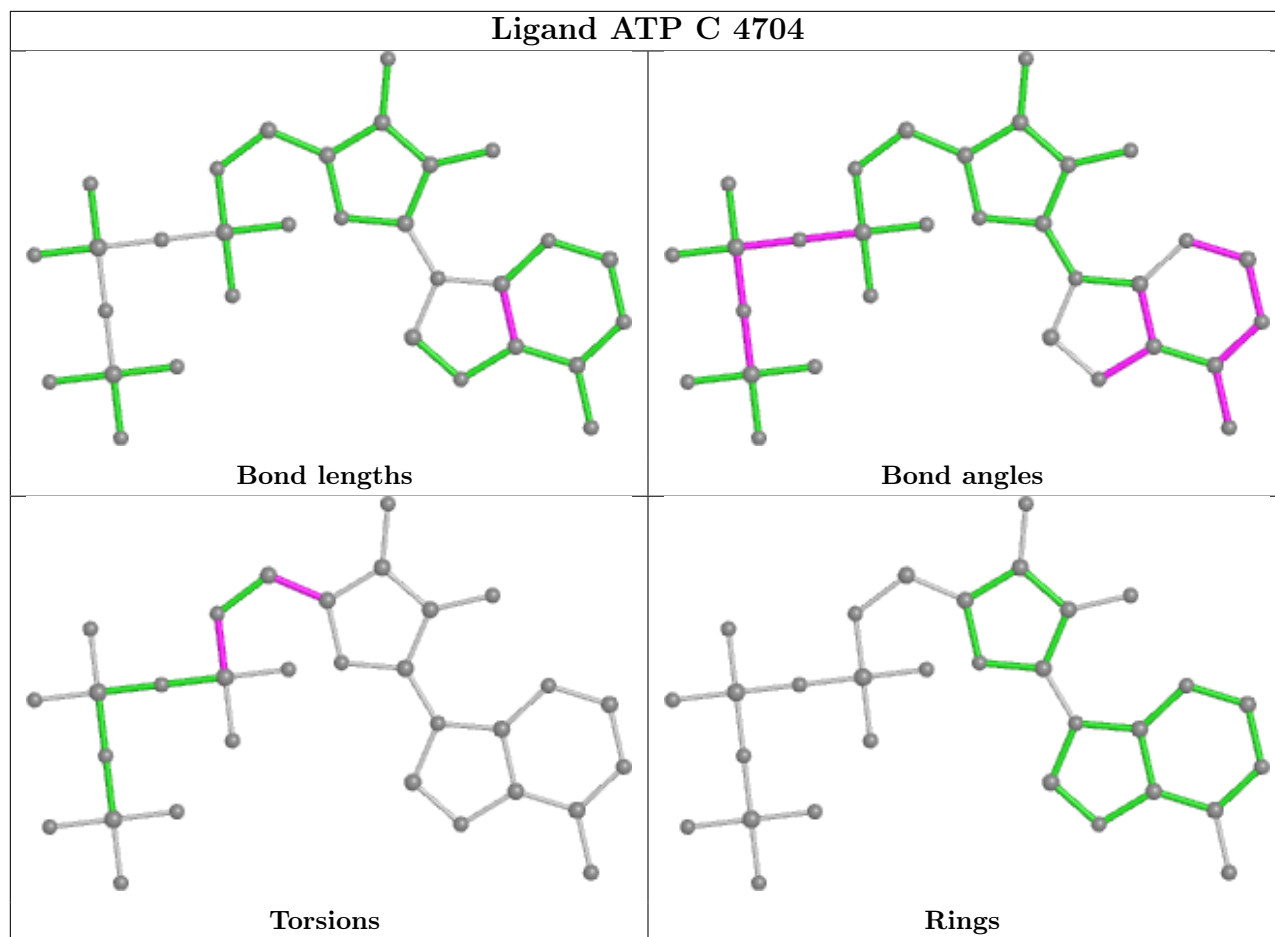
Mol	Chain	Res	Type	Atoms
19	C	4701	ADP	C5'-O5'-PA-O1A
19	C	4702	ADP	C5'-O5'-PA-O1A
19	C	4702	ADP	C5'-O5'-PA-O2A
20	C	4704	ATP	C5'-O5'-PA-O1A
20	C	4704	ATP	C5'-O5'-PA-O3A
20	C	4704	ATP	C3'-C4'-C5'-O5'
20	C	4704	ATP	O4'-C4'-C5'-O5'
19	C	4701	ADP	C5'-O5'-PA-O3A
19	C	4701	ADP	C5'-O5'-PA-O2A
19	C	4702	ADP	C5'-O5'-PA-O3A
19	C	4703	ADP	C5'-O5'-PA-O1A
19	C	4702	ADP	O4'-C4'-C5'-O5'

There are no ring outliers.

No monomer is involved in short contacts.

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





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	A	22
2	B	13
3	C	9
5	e	3

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	389:ASP	C	390:THR	N	29.62
1	e	1233:LEU	C	1234:ALA	N	29.14
1	e	1201:ARG	C	1202:GLN	N	19.87
1	A	1299:VAL	C	1300:GLN	N	17.01
1	e	1251:GLU	C	1252:LYS	N	15.83
1	A	2300:SER	C	2301:ASP	N	13.90
1	A	2232:GLU	C	2233:PRO	N	13.47
1	B	4440:MET	C	4441:ILE	N	12.83
1	A	1507:PRO	C	1508:GLY	N	12.62
1	B	2495:LYS	C	2496:VAL	N	12.29
1	A	2533:PRO	C	2534:VAL	N	10.44
1	A	4018:CYS	C	4019:ILE	N	10.38
1	B	2583:MET	C	2584:VAL	N	9.42
1	A	2296:ALA	C	2297:GLY	N	9.01
1	A	4109:ASN	C	4110:ALA	N	8.24
1	A	2058:THR	C	2059:LEU	N	8.10
1	A	2897:GLN	C	2898:ARG	N	6.96
1	A	1972:PHE	C	1973:ASP	N	6.76
1	B	1775:VAL	C	1776:ARG	N	6.38
1	A	2132:ALA	C	2133:GLY	N	5.82
1	A	3472:THR	C	3473:ILE	N	5.79
1	A	3921:LYS	C	3922:THR	N	5.38
1	B	2658:SER	C	2659:GLY	N	5.09
1	A	2630:GLU	C	2631:ALA	N	4.86
1	B	2091:ARG	C	2092:GLY	N	4.86
1	B	3793:ASP	C	3794:GLU	N	4.34
1	A	1725:GLY	C	1726:TYR	N	4.16

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	A	2000:LEU	C	2001:MET	N	3.91
1	A	2612:GLU	C	2613:THR	N	3.44
1	B	4123:ASP	C	4124:PRO	N	3.30
1	B	2229:LYS	C	2230:THR	N	3.20
1	B	3552:ASN	C	3553:LEU	N	3.19
1	A	2495:ASP	C	2496:MET	N	3.16
1	B	2702:LYS	C	2703:ALA	N	3.15
1	B	2006:PRO	C	2007:GLY	N	3.09
1	A	1592:ARG	C	1593:SER	N	3.08
1	A	2176:THR	C	2177:ILE	N	3.05
1	B	1212:ILE	C	1213:PRO	N	2.70
1	C	3218:LYS	C	3219:ASP	N	1.19
1	C	3227:LYS	C	3228:LYS	N	1.19
1	C	3311:ASN	C	3312:GLN	N	1.19
1	C	3216:GLU	C	3217:SER	N	1.18
1	C	3225:ALA	C	3226:ASN	N	1.18
1	C	3234:LYS	C	3235:TYR	N	1.18
1	C	3272:SER	C	3273:TYR	N	1.18
1	C	3304:GLU	C	3305:LEU	N	1.18
1	C	3334:LYS	C	3335:TRP	N	1.18

6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-16304. These allow visual inspection of the internal detail of the map and identification of artifacts.

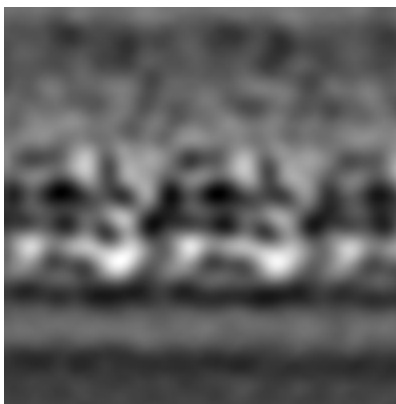
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

6.1.1 Primary map



X

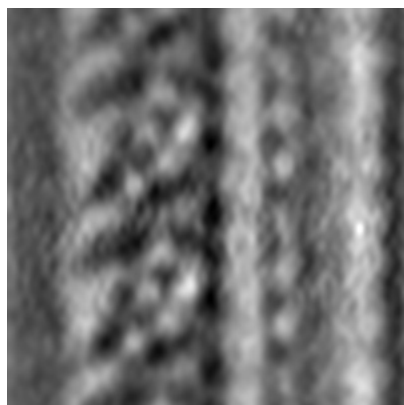


Y

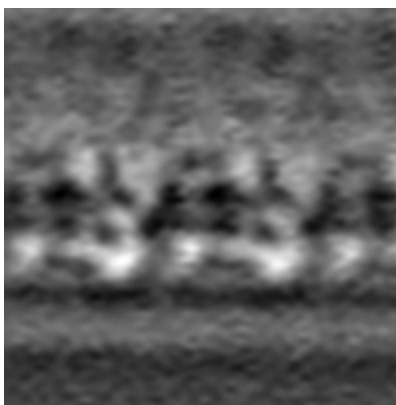


Z

6.1.2 Raw map



X



Y



Z

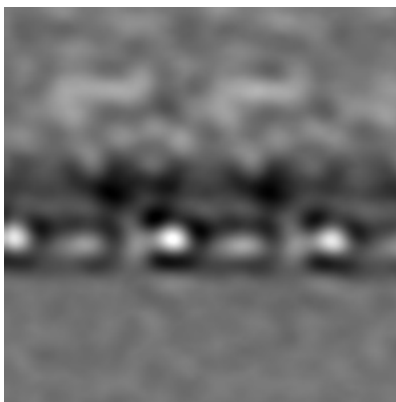
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

6.2.1 Primary map



X Index: 37

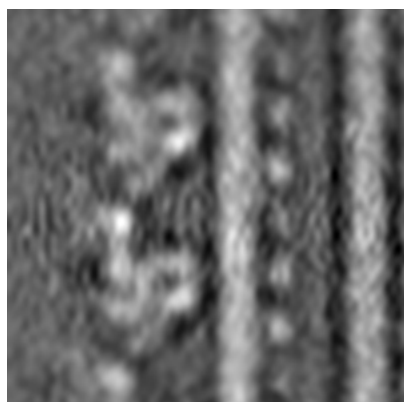


Y Index: 37

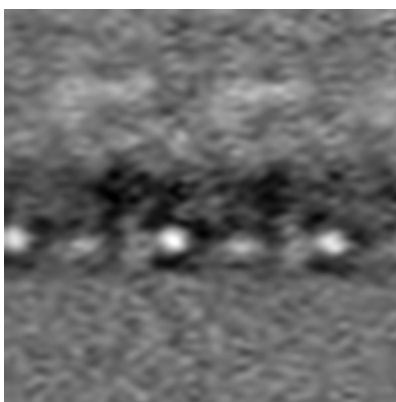


Z Index: 37

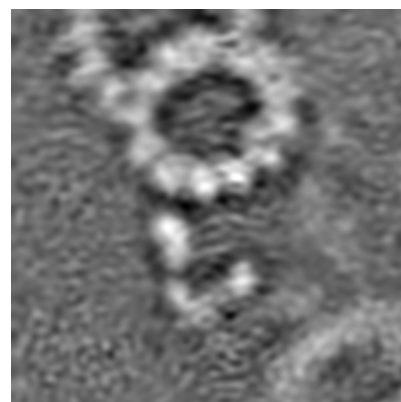
6.2.2 Raw map



X Index: 37



Y Index: 37



Z Index: 37

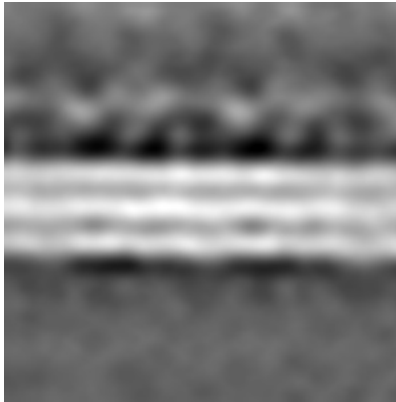
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

6.3.1 Primary map



X Index: 29

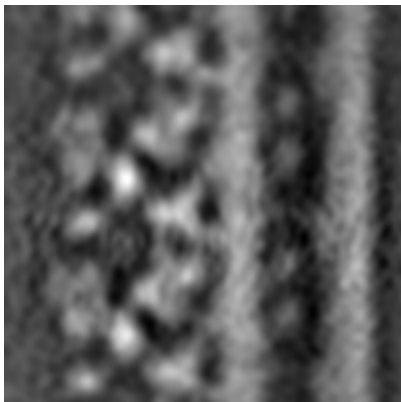


Y Index: 42

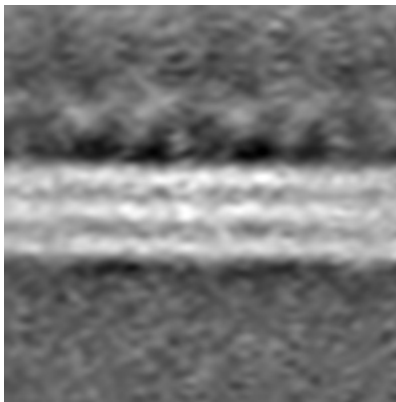


Z Index: 22

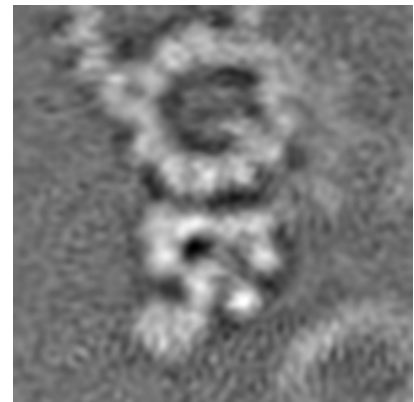
6.3.2 Raw map



X Index: 29



Y Index: 42

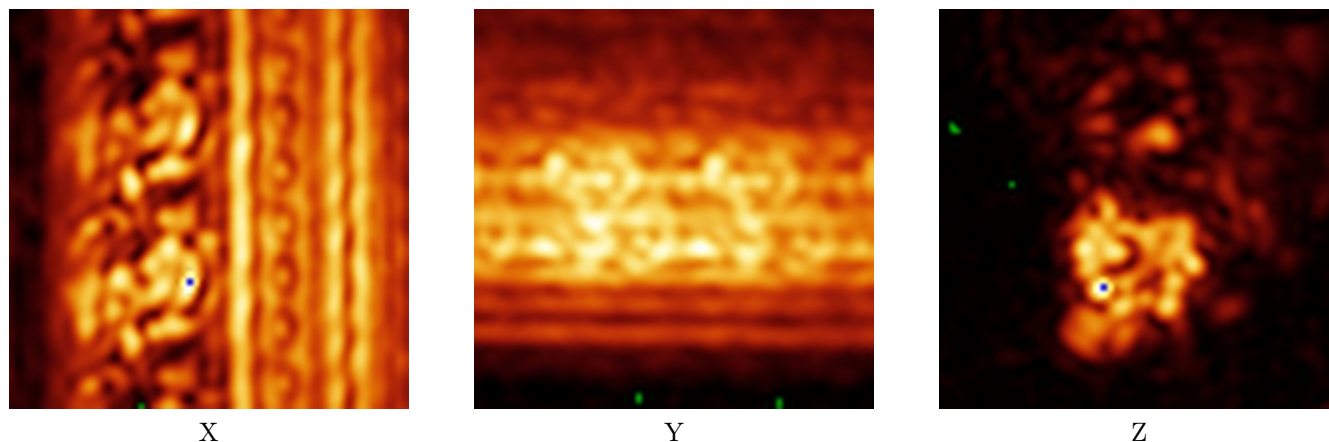


Z Index: 22

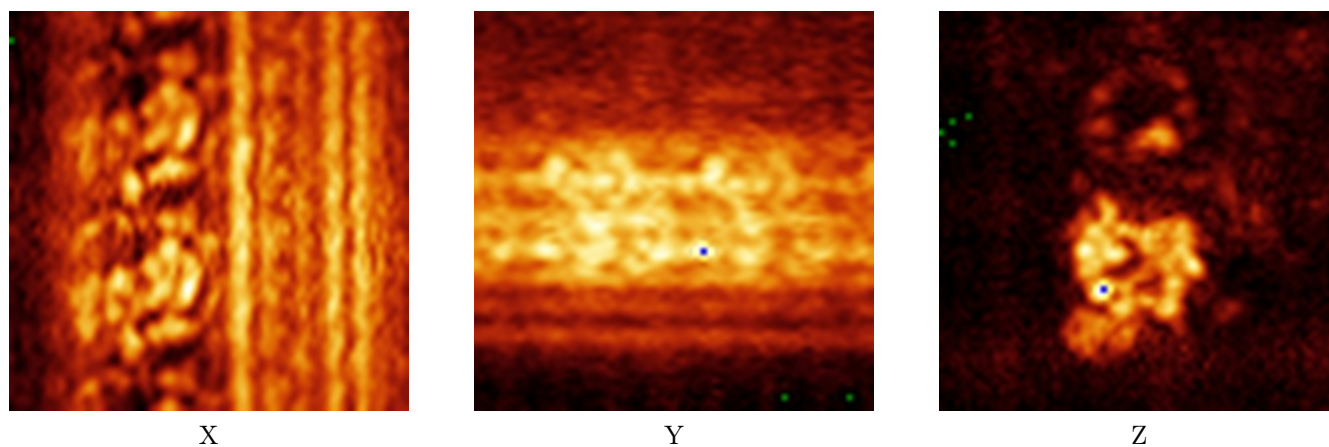
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



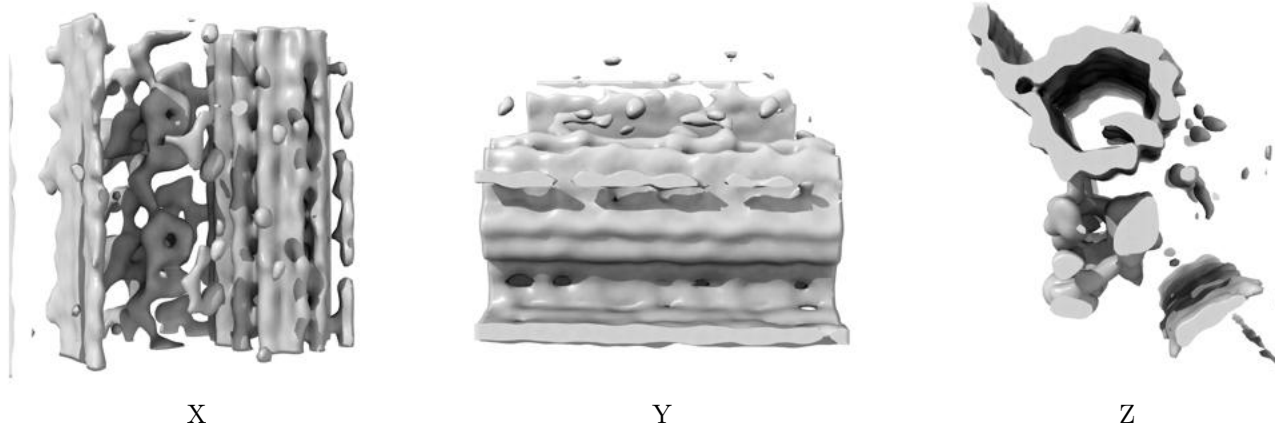
6.4.2 Raw map



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.

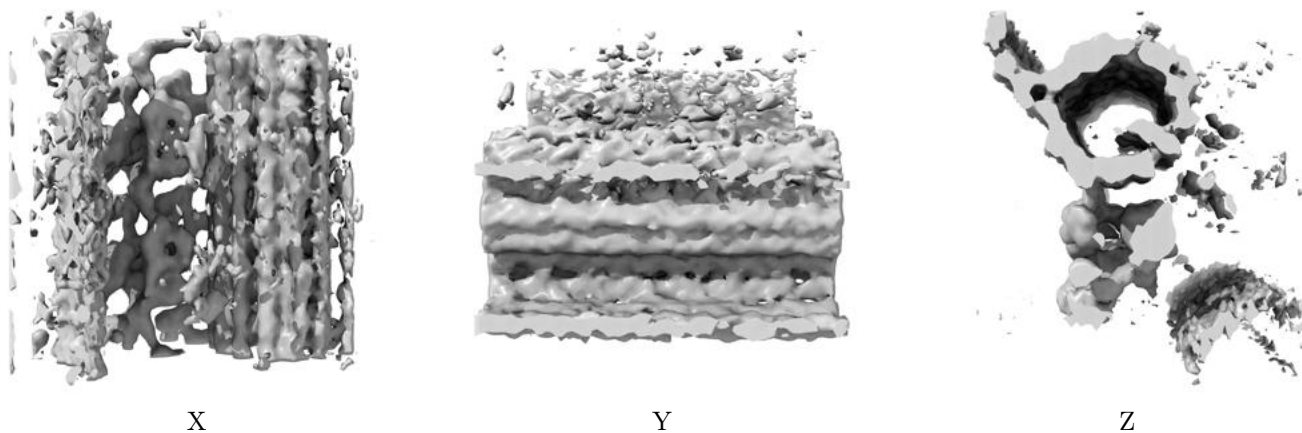
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.07. 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.

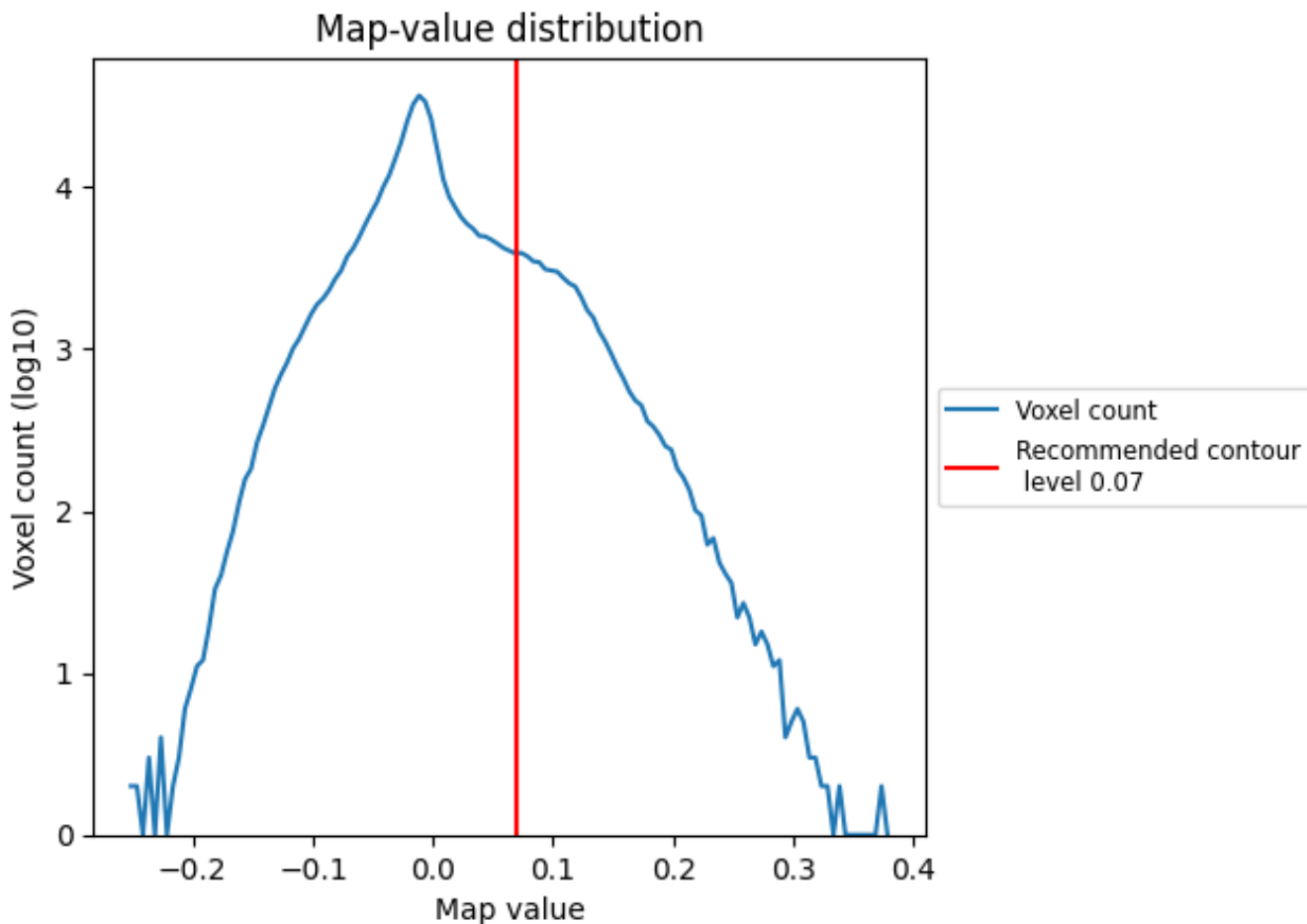
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

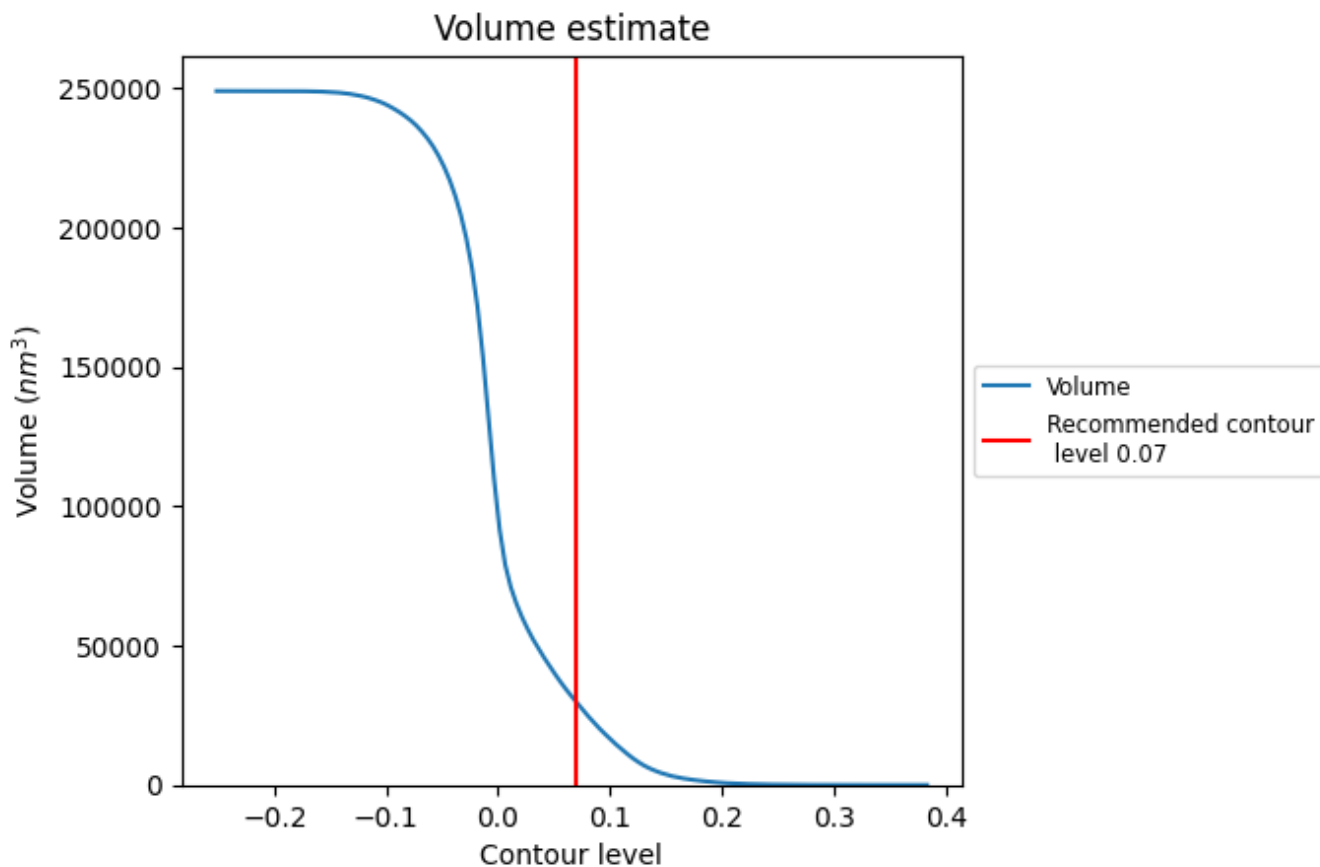
This section contains the results of statistical analysis of the map.

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.

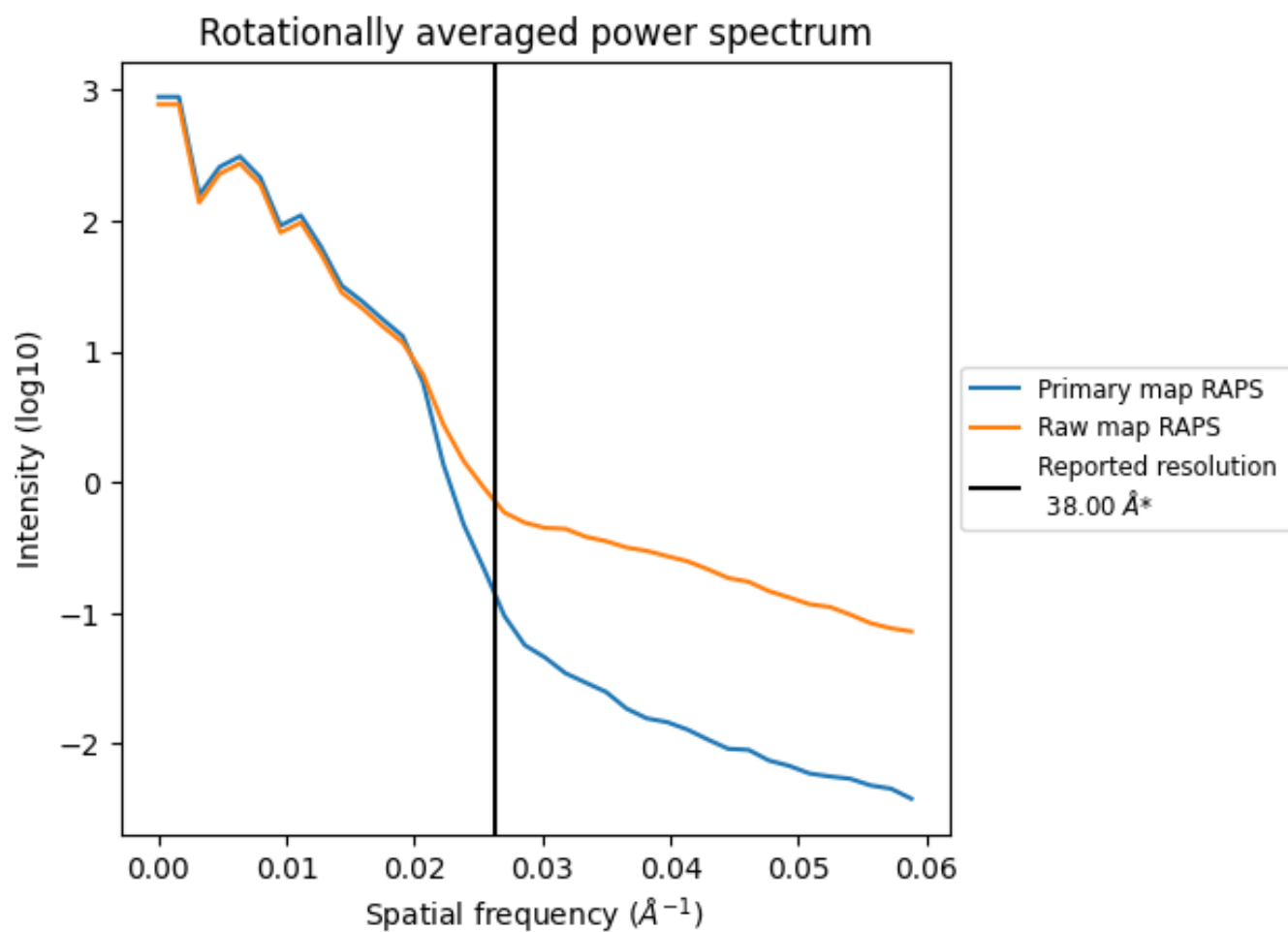
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 29745 nm^3 ; this corresponds to an approximate mass of 26870 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

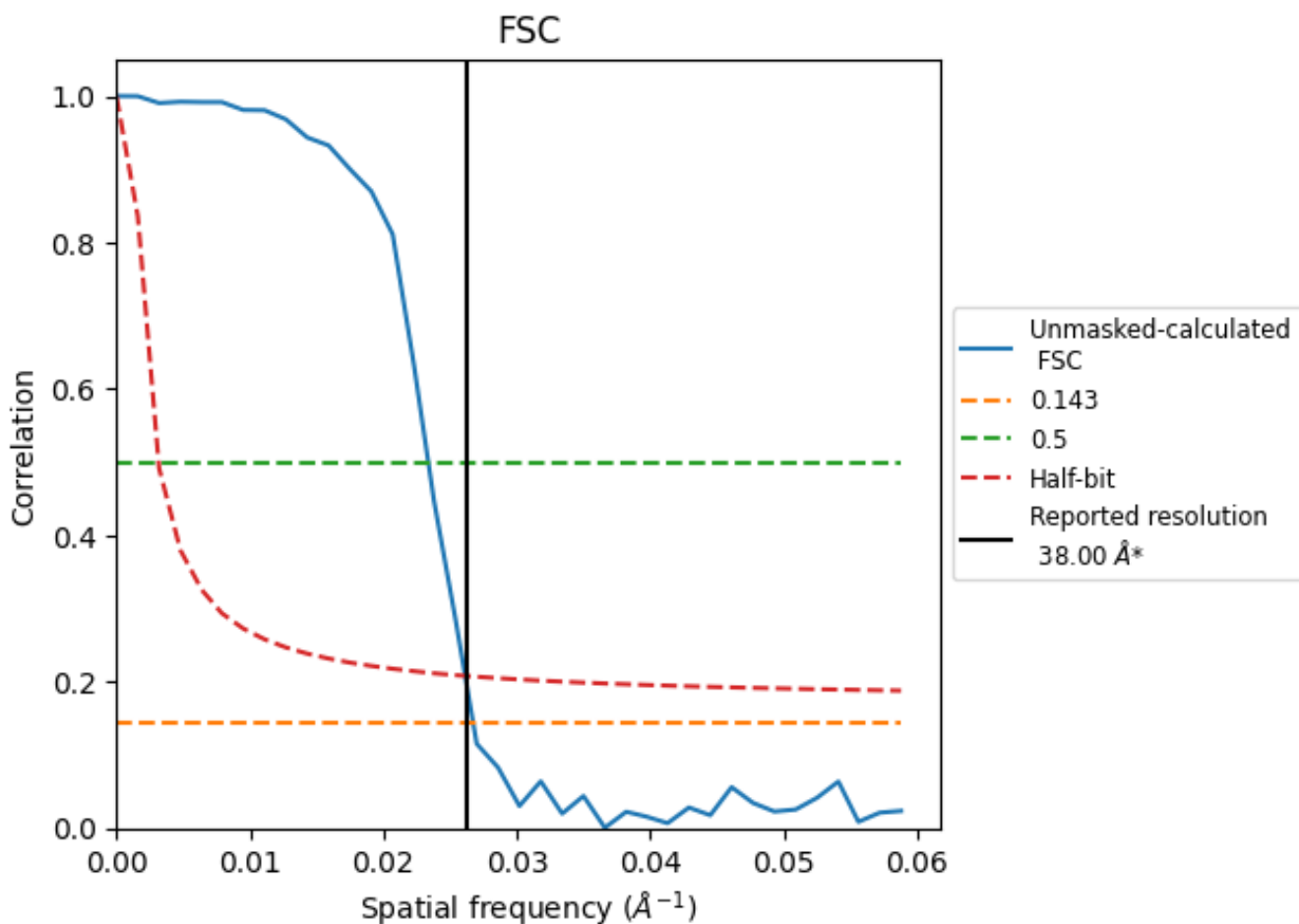


*Reported resolution corresponds to spatial frequency of 0.026 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.026 Å⁻¹

8.2 Resolution estimates [i](#)

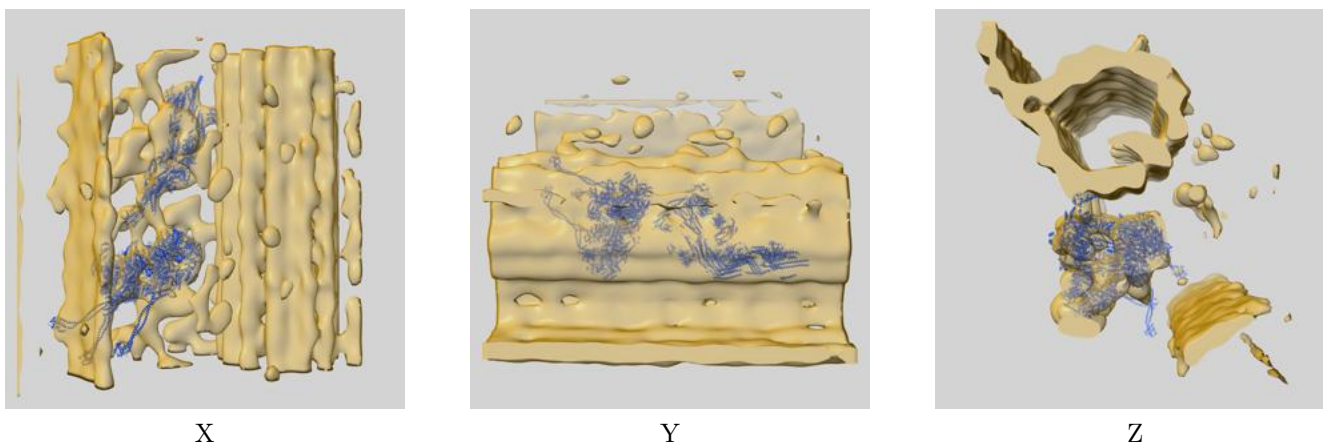
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	38.00	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	37.31	42.74	38.17

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

9 Map-model fit [i](#)

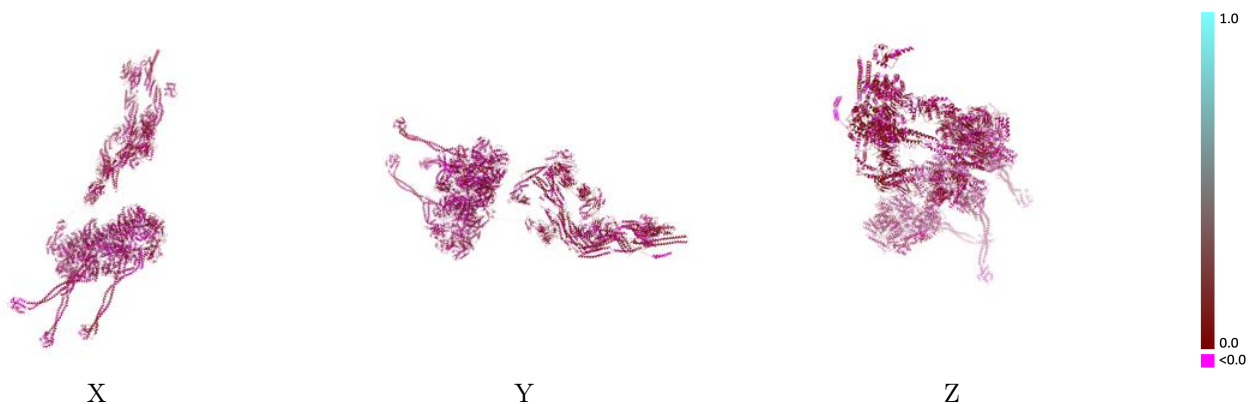
This section contains information regarding the fit between EMDB map EMD-16304 and PDB model 8BWY. Per-residue inclusion information can be found in section 3 on page 9.

9.1 Map-model overlay [i](#)



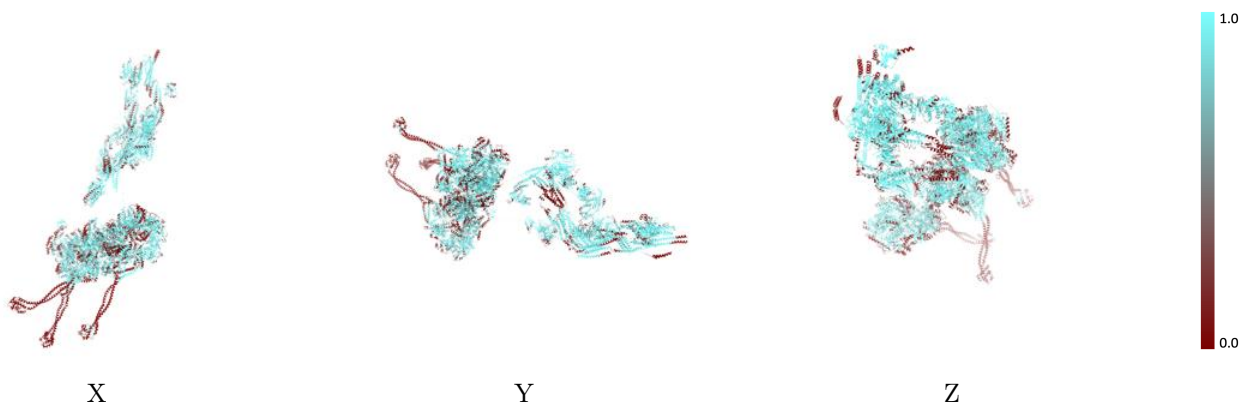
The images above show the 3D surface view of the map at the recommended contour level 0.07 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



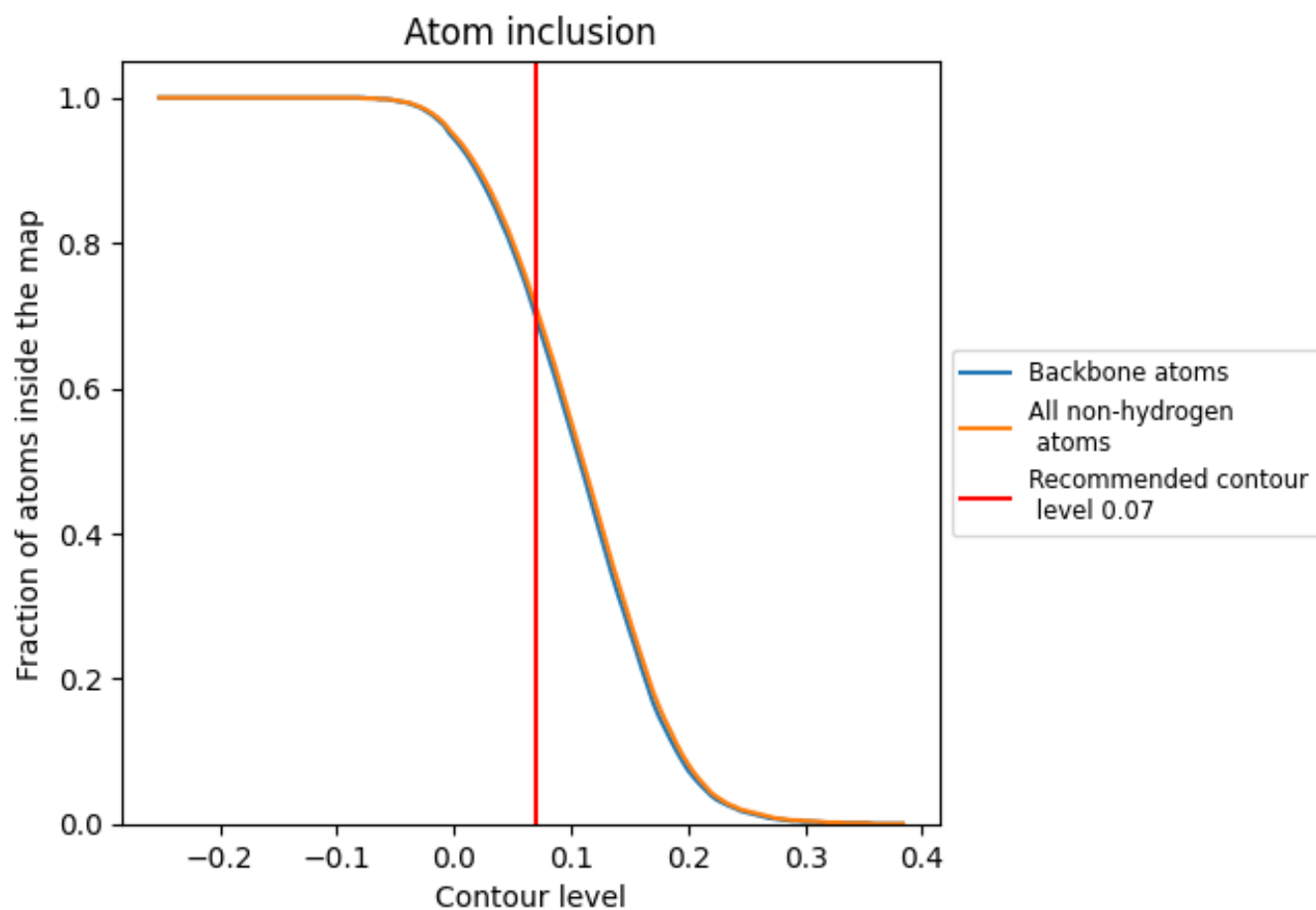
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.07).









































9.4 Atom inclusion [i](#)



At the recommended contour level, 70% of all backbone atoms, 71% 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 (0.07) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7120	 0.0390
A	 0.6750	 0.0370
B	 0.6630	 0.0380
C	 0.7000	 0.0390
F	 0.8470	 0.0450
G	 0.8310	 0.0380
H	 0.9050	 0.0530
I	 0.8240	 0.0560
J	 0.9210	 0.0690
K	 0.7370	 0.0400
L	 0.7260	 0.0150
M	 0.9820	 0.0700
N	 0.9300	 0.0450
O	 0.8320	 0.0260
P	 0.9330	 0.0590
T	 0.6940	 0.0350
V	 0.7880	 0.0600
d	 0.9190	 0.0420
e	 0.7580	 0.0260
x	 0.6910	 0.0510

