



Full wwPDB EM Validation Report ⓘ

Mar 11, 2024 – 01:12 AM EDT

PDB ID : 6PSU
EMDB ID : EMD-20464
Title : Escherichia coli RNA polymerase promoter unwinding intermediate (TRPi2) with TraR and rpsT P2 promoter
Authors : Chen, J.; Chiu, C.E.; Campbell, E.A.; Darst, S.A.
Deposited on : 2019-07-13
Resolution : 3.90 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.dev70
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

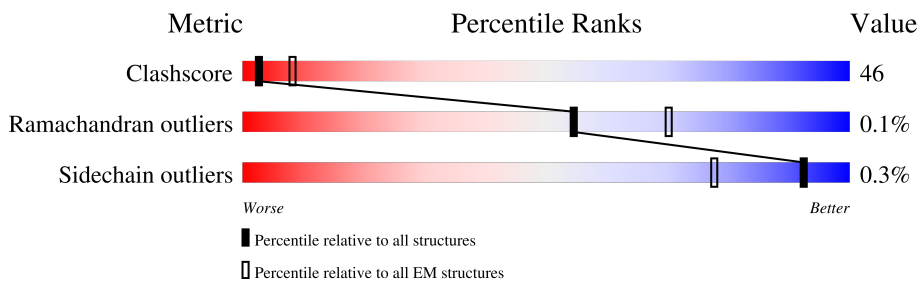
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.90 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	N	72	44% (green), 56% (yellow)
2	G	329	32% (green), 38% (yellow), 30% (grey)
2	H	329	24% (green), 42% (yellow), 34% (grey)
2	M	329	9% (red), 13% (orange), 78% (grey)
3	I	1342	36% (green), 63% (yellow)
4	J	1430	6% (red), 34% (green), 59% (yellow), 6% (grey)
5	K	91	27% (green), 52% (yellow), 21% (grey)
6	L	616	12% (red), 25% (green), 61% (yellow), 14% (grey)

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Mol	Chain	Length	Quality of chain
7	O	85	
8	P	85	

2 Entry composition i

There are 11 unique types of molecules in this entry. The entry contains 32323 atoms, of which 156 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 Protein TraR.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	N	72	571	353	105	108	5	0	0

- Molecule 2 is a protein called DNA-directed RNA polymerase subunit alpha.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	G	230	1775	1108	314	347	6	0	0
2	H	217	1668	1043	293	326	6	0	0
2	M	73	572	362	100	108	2	0	0

- Molecule 3 is a protein called DNA-directed RNA polymerase subunit beta.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	I	1340	10567	6631	1841	2052	43	0	0

- Molecule 4 is a protein called DNA-directed RNA polymerase subunit beta'.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	J	1344	10433	6556	1856	1971	50	0	0

There are 24 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
J	1	VAL	-	expression tag	UNP P0A8T7
J	1408	LEU	-	expression tag	UNP P0A8T7
J	1409	GLU	-	expression tag	UNP P0A8T7
J	1410	LEU	-	expression tag	UNP P0A8T7
J	1411	GLU	-	expression tag	UNP P0A8T7

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Chain	Residue	Modelled	Actual	Comment	Reference
J	1412	VAL	-	expression tag	UNP P0A8T7
J	1413	LEU	-	expression tag	UNP P0A8T7
J	1414	PHE	-	expression tag	UNP P0A8T7
J	1415	GLN	-	expression tag	UNP P0A8T7
J	1416	GLY	-	expression tag	UNP P0A8T7
J	1417	PRO	-	expression tag	UNP P0A8T7
J	1418	SER	-	expression tag	UNP P0A8T7
J	1419	SER	-	expression tag	UNP P0A8T7
J	1420	GLY	-	expression tag	UNP P0A8T7
J	1421	HIS	-	expression tag	UNP P0A8T7
J	1422	HIS	-	expression tag	UNP P0A8T7
J	1423	HIS	-	expression tag	UNP P0A8T7
J	1424	HIS	-	expression tag	UNP P0A8T7
J	1425	HIS	-	expression tag	UNP P0A8T7
J	1426	HIS	-	expression tag	UNP P0A8T7
J	1427	HIS	-	expression tag	UNP P0A8T7
J	1428	HIS	-	expression tag	UNP P0A8T7
J	1429	HIS	-	expression tag	UNP P0A8T7
J	1430	HIS	-	expression tag	UNP P0A8T7

- Molecule 5 is a protein called DNA-directed RNA polymerase subunit omega.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	K	72	577	352	110	114	1	0	0

- Molecule 6 is a protein called RNA polymerase sigma factor RpoD.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	L	529	4277	2677	753	821	26	0	0

There are 3 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
L	-2	SER	-	expression tag	UNP Q0P6L9
L	-1	GLU	-	expression tag	UNP Q0P6L9
L	0	PHE	-	expression tag	UNP Q0P6L9

- Molecule 7 is a DNA chain called DNA (85-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
7	O	42	863	411	168	242	42	0	0

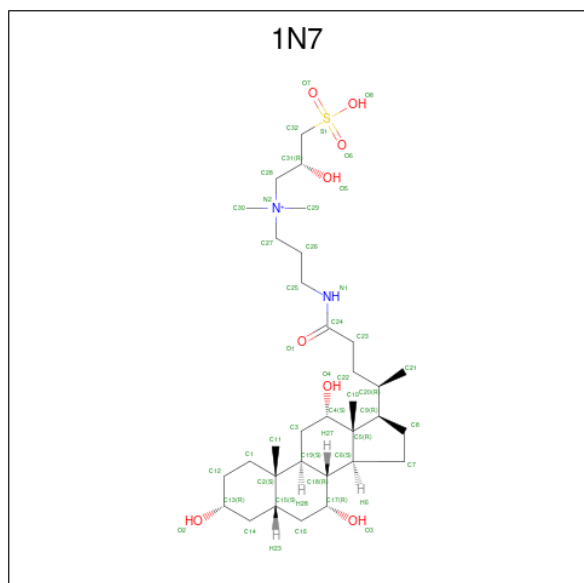
- Molecule 8 is a DNA chain called DNA (85-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
8	P	37	752	363	117	235	37	0	0

- Molecule 9 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
			Total	Zn	
9	N	1	1	1	0
9	J	2	2	2	0

- Molecule 10 is CHAPSO (three-letter code: 1N7) (formula: C₃₂H₅₉N₂O₈S).



Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
10	N	1	66	24	39	3	0
10	I	1	66	24	39	3	0
10	J	1	66	24	39	3	0

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Mol	Chain	Residues	Atoms				AltConf
			Total	C	H	O	
10	L	1	66	24	39	3	0

- Molecule 11 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
			Total	Mg	
11	J	1	1	1	0

3 Residue-property plots

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

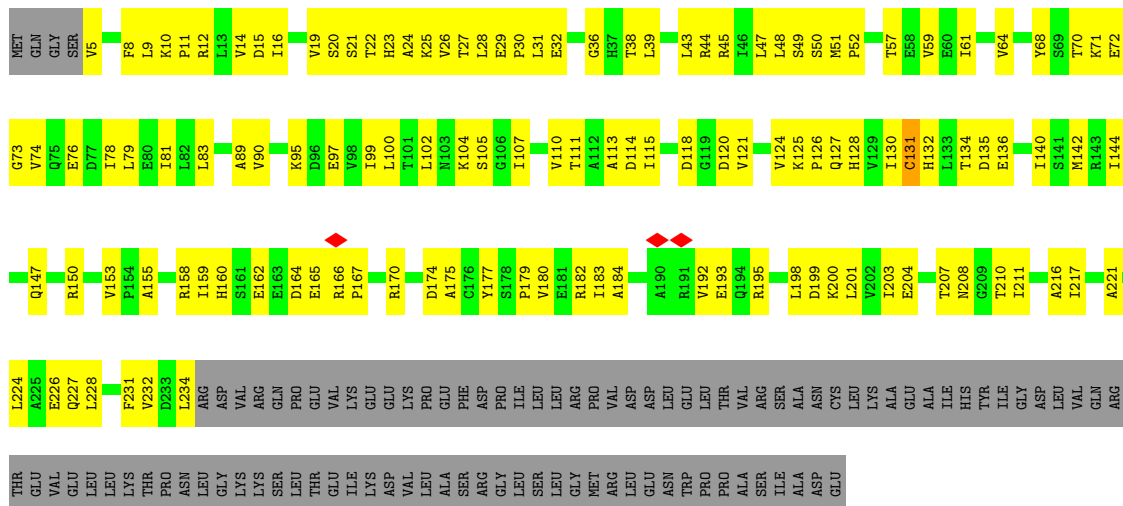
- Molecule 1: Protein TraR

Chain N: 

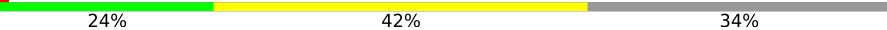


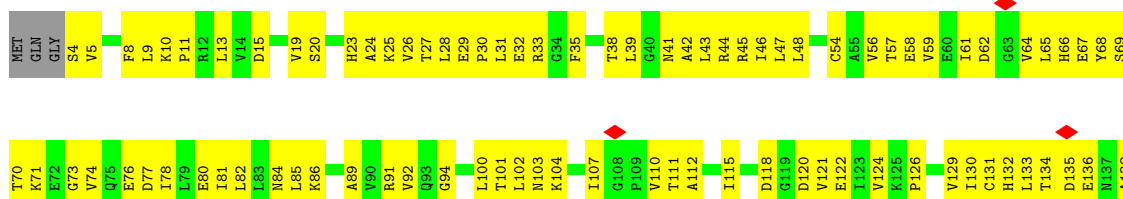
- Molecule 2: DNA-directed RNA polymerase subunit alpha

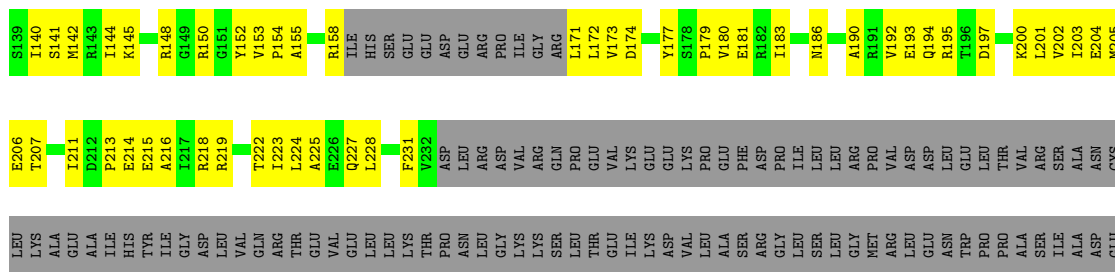
Chain G: 



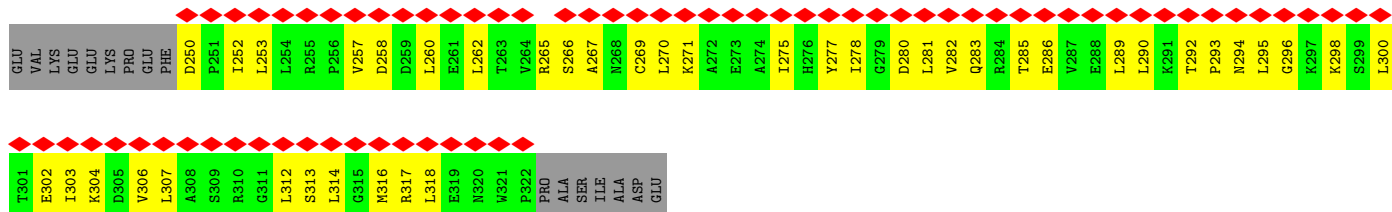
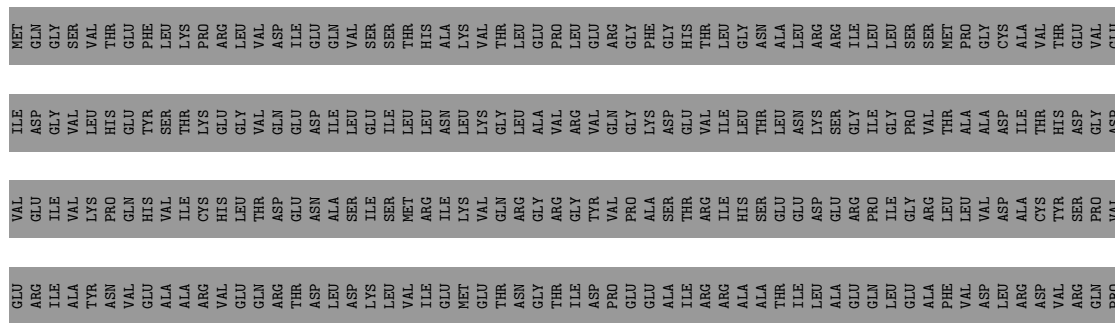
- Molecule 2: DNA-directed RNA polymerase subunit alpha

Chain H: 

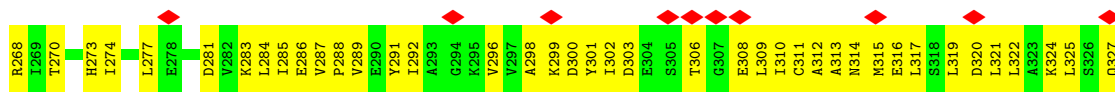
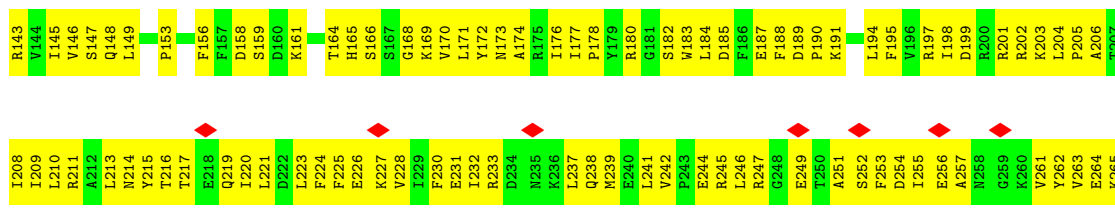
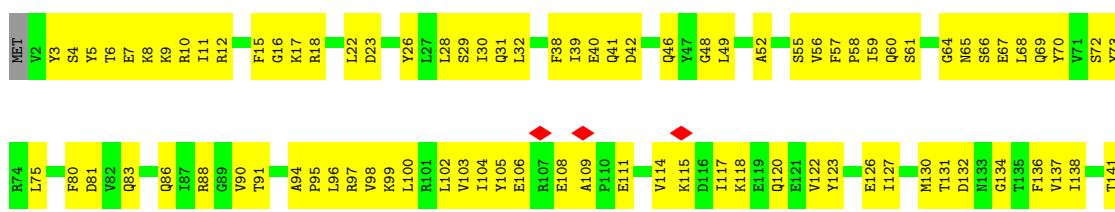




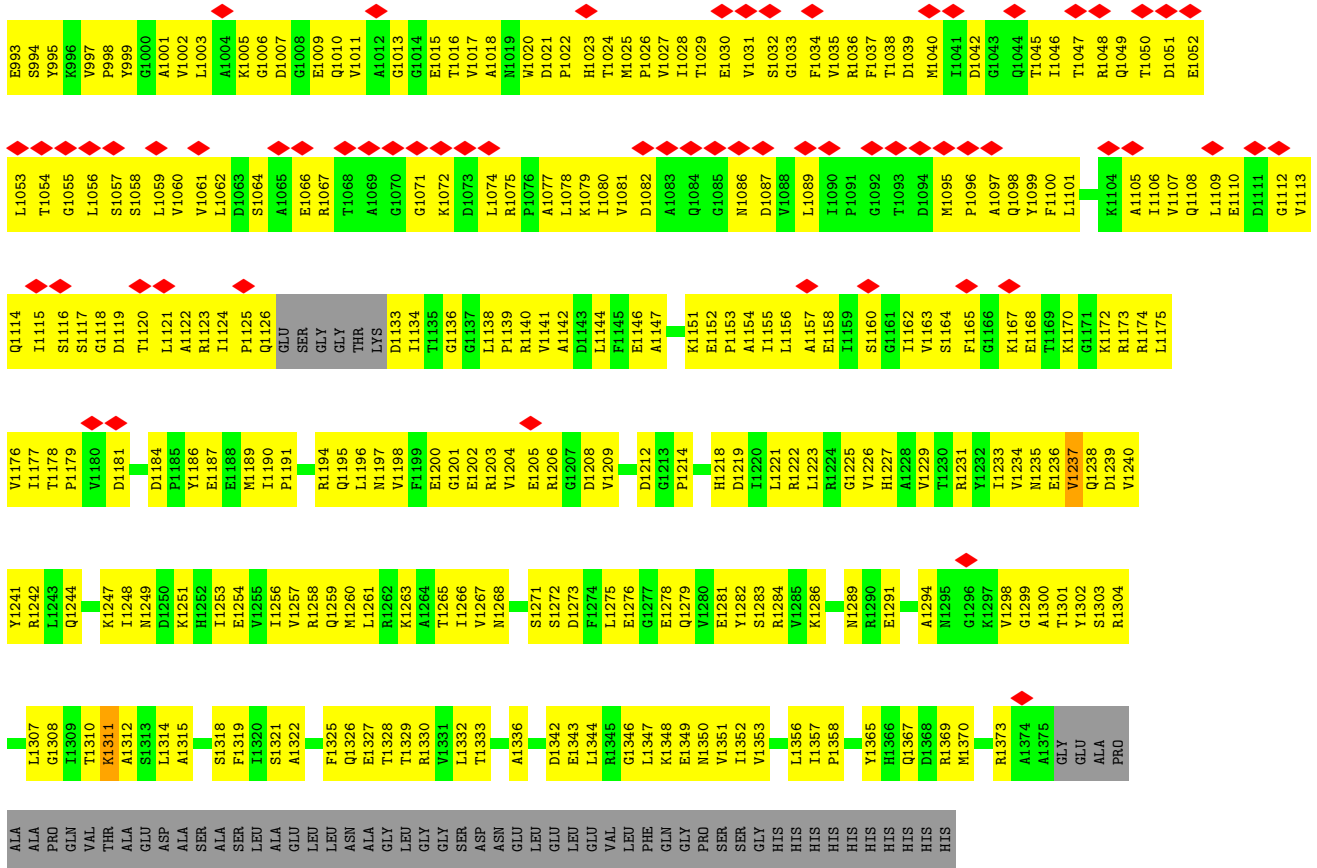
• Molecule 2: DNA-directed RNA polymerase subunit alpha



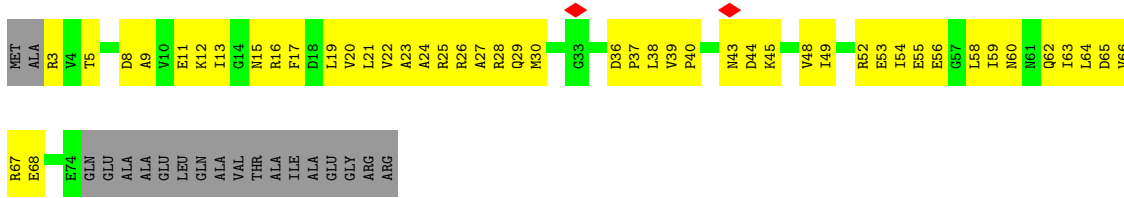
• Molecule 3: DNA-directed RNA polymerase subunit beta



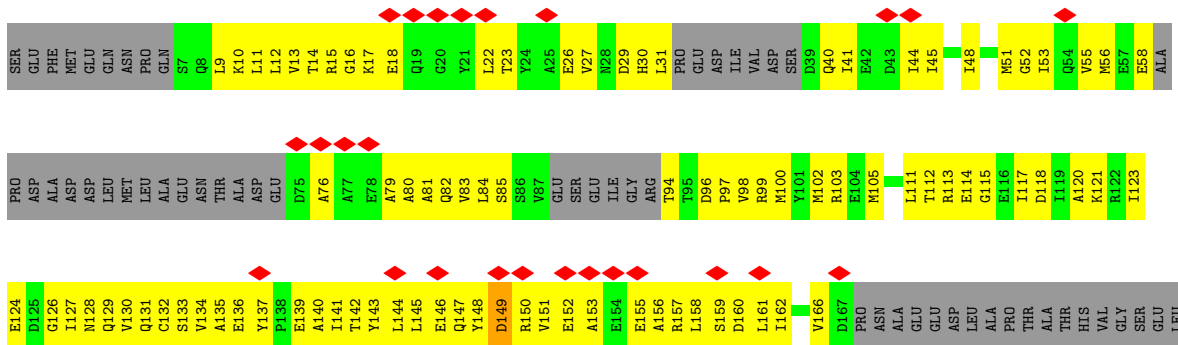
K1294	S1295	D1296	D1297	G1300	R1301	T1302	K1303	M1304	Y1305	K1306	N1307	I1308	V1309	N1312	M1319	F1320	I1321	V1322	S1323	L1324	L1325	L1326	L1327	K1328	E1329	I1330	R1331	S1332	L1333	G1334	I1335	L1339	E1340	D1341	GLU																																				
K1158	V1159	L1160	L1161	F1164	S1165	D1166	E1167	E1168	V1169	M1170	R1171	L1172	A1173	L1176	L1177	K1178	M1180	P1181	I1182	A1183	T1184	P1185	F1186	F1187	G1188	G1189	K1190	K1191	K1192	L1193	L1194	A1195	K1196	E1197	L1198	L1204	P1205	Q1209	I1210	R1211	L1212	Y1213	D1214	G1215	R1216	T1217	G1218	L1219	L1220	Q1221	E1222	R1223	V1225																		
T1226	V1227	G1228	Y1229	M1230	M1232	L1233	K1234	L1235	M1236	H1237	L1238	V1239	D1240	D1241	K1242	M1243	H1244	A1245	S1247	T1248	G1249	S1250	Y1251	S1252	T1255	G1256	Q1257	P1258	F1265	Q1268	R1269	F1270	G1271	E1272	V1275	M1276	L1277	L1278	E1279	A1280	Y1281	G1282	A1283	A1284	Y1285	T1286	L1287	Q1288	E1289	M1290	L1291	T1292	V1293																		
E1024	F1025	E1026	K1027	L1028	L1029	K1032	R1033	R1034	K1035	Q1038	G1039	A1043	P1044	L1047	K1048	I1049	V1050	K1051	Y1052	L1053	L1054	A1055	V1056	R1059	I1060	D1064	K1065	M1066	A1067	G1068	R1069	H1070	G1071	N1072	K1073	I1076	S1077	K1078	I1079	N1080	P1081	I1082	E1083	D1084	M1085	P1086	Y1087	I1088	A1015	E1016	Q1017	Y1018	D1019	E1020	L1021																
E962	E963	L964	Q965	K966	L967	E968	L971	S972	S973	R974	R975	R976	A977	V978	L979	V980	G982	G983	V984	E985	A986	E987	K988	L989	D990	G991	L992	P993	R994	D995	R996	W997	L998	E999	L1000	G1001	T1003	D1004	E1005	E1006	K1007	Q1008	M1009	Q1010	E1011	E1012	Q1013	L1014	A1015	E1016	Q1017	Y1018	D1019	E1020	L1021																
L895	T896	P897	E898	E899	K900	L901	L902	R903	A904	I905	V906	G907	E908	K909	T910	S911	K912	K913	D914	S915	S916	S917	L918	R919	V920	P921	V924	V928	R929	D930	R931	Q932	E933	F934	T935	R936	V939	E940	K941	D942	K943	R944	A945	L946	I948	E949	L953	A956	D959	R960	S961																				
V823	D826	R827	F828	T829	H832	I833	C838	S840	R841	D842	T843	K844	P847	E848	E849	I850	T851	A852	D853	L854	P855	N856	V857	G858	E859	A860	A861	L862	S863	K864	L865	D866	G869	I870	V871	Y872	A875	E876	V877	D881	L882	L883	V884	G885	K886	V887	P888	E892																							
T757	R758	N760	E761	T762	T763	C764	L765	L766	Q767	A768	M769	C770	V771	S772	L773	G774	E775	F776	V777	E778	R779	G780	D781	V782	L783	A784	R785	D786	G787	P787	L791	E792	E793	L794	A795	L796	G797	N798	N799	M800	R801	V802	A803	M805	N808	G809	Y810	N811	F812	E813	D814	S815	I816	L817	V818	S819															
M685	Q686	R687	Q688	A689	V690	L693	L694	L695	V700	E705	R706	A707	V708	D711	S712	G713	V714	T715	A716	V717	S643	L644	F645	S646	R647	G722	V723	A724	Q625	L626	M627	E628	V629	L633	V634	T635	C636	R637	E641	S642	I572	N573	S576	V577	Y578	A579	Q680	L681	M682	E583	Y584	G585	G586	L587	E588	T589	Y591	R592	K593	V594	T595	D596	G597	I603	H604	Y605	L606	S607	E610	E611	Y614
V615	I616	A617	Q618	A619	M622	L623	D624	G627	H628	I629	V630	L633	V634	T635	C636	R637	E641	S642	I572	N573	S576	V577	Y578	A579	Q680	L681	M682	E583	Y584	G585	G586	L587	E588	T589	Y591	R592	K593	V594	T595	D596	G597	I603	H604	Y605	L606	S607	E610	E611	Y614																						
L468	V469	R470	V471	E472	V475	K476	G482	D483	L484	T485	D486	L487	M488	P489	Q490	S491	K492	I425	A426	D427	K430	K431	L432	I433	D434	I435	R436	M437	G438	K439	G440	E441	D444	D445	D446	H447	L448	G449	M450	R451	I453	V456	M459	A460	E461	R462	Q463	F464	R465	V466	G467																				
R548	D549	V550	H551	T552	G556	R557	V558	C559	P560	I561	E562	T563	P564	E565	G566	P567	N568	G570	L571	I572	N573	S576	V577	Y578	A579	Q680	L681	M682	E583	Y584	G585	G586	L587	E588	T589	Y591	R592	K593	V594	T595	D596	G597	I603	H604	Y605	L606	S607	E610	E611	Y614																					
L468	V469	R470	V471	E472	V475	K476	G482	D483	L484	T485	D486	L487	M488	P489	Q490	S491	K492	I425	A426	D427	K430	K431	L432	I433	D434	I435	R436	M437	G438	K439	G440	E441	D444	D445	D446	H447	L448	G449	M450	R451	I453	V456	M459	A460	E461	R462	Q463	F464	R465	V466	G467																				

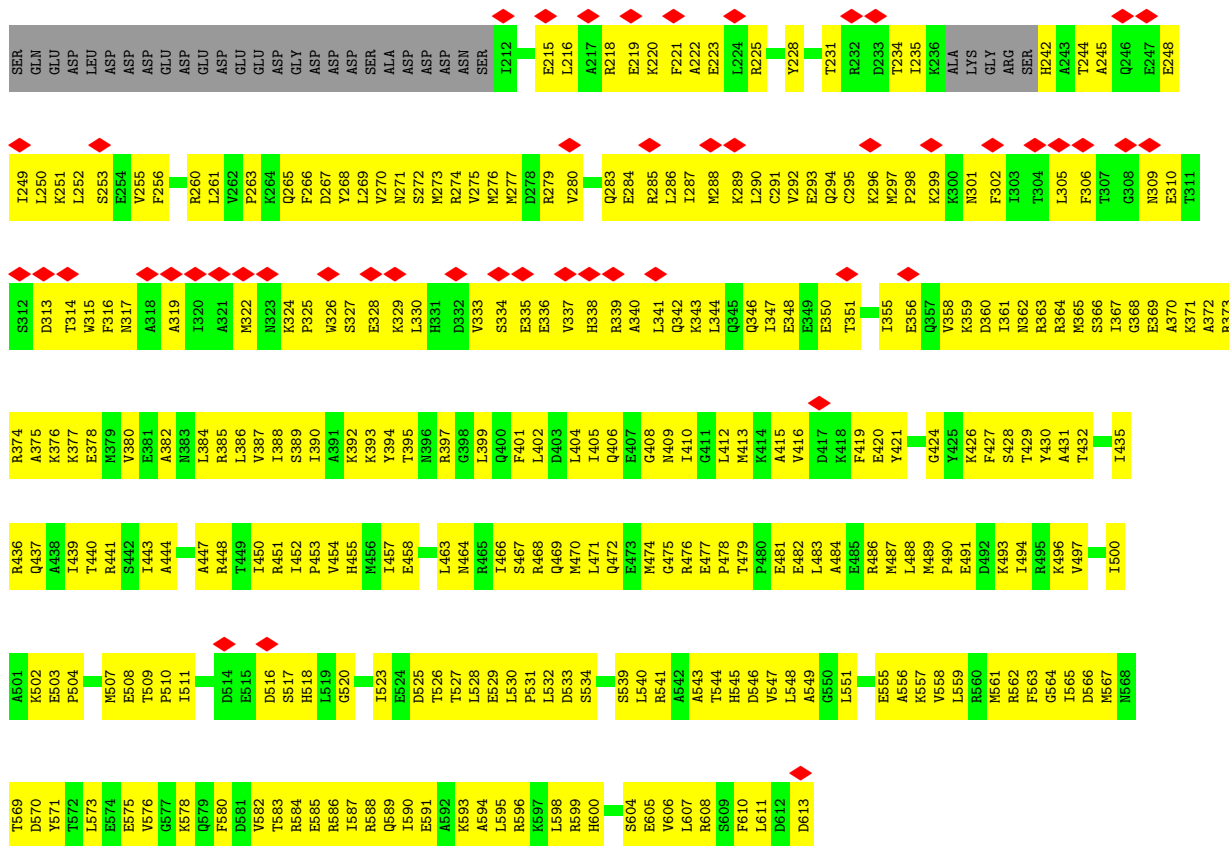


• Molecule 5: DNA-directed RNA polymerase subunit omega

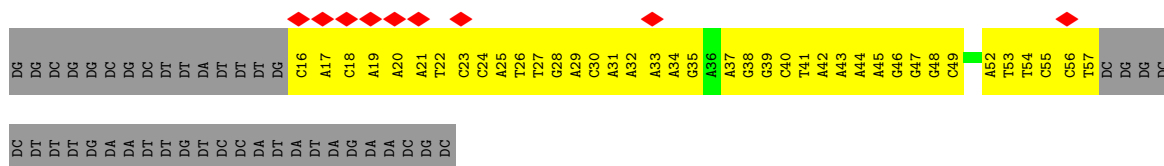
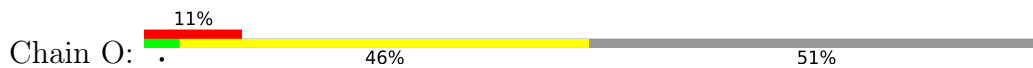


• Molecule 6: RNA polymerase sigma factor RpoD

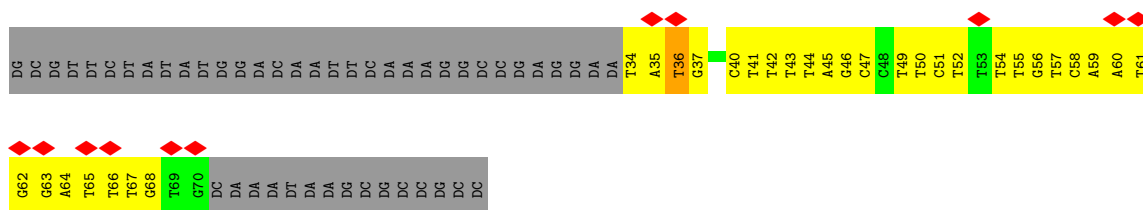




• Molecule 7: DNA (85-MER)



• Molecule 8: DNA (85-MER)



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	46553	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	80	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.150	Depositor
Minimum map value	-0.097	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.006	Depositor
Recommended contour level	0.02	Depositor
Map size (\AA)	332.8, 332.8, 332.8	wwPDB
Map dimensions	256, 256, 256	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.3, 1.3, 1.3	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: ZN, MG, 1N7

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	N	0.37	0/581	0.50	0/785
2	G	0.40	0/1797	0.53	0/2437
2	H	0.37	0/1687	0.54	0/2287
2	M	0.26	0/579	0.54	0/784
3	I	0.44	0/10736	0.55	1/14487 (0.0%)
4	J	0.41	0/10592	0.54	0/14308
5	K	0.32	0/579	0.49	0/779
6	L	0.29	0/4329	0.47	1/5820 (0.0%)
7	O	0.63	0/971	0.92	0/1495
8	P	0.59	0/837	1.06	1/1290 (0.1%)
All	All	0.41	0/32688	0.57	3/44472 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
3	I	0	4
4	J	0	1
All	All	0	5

There are no bond length outliers.

All (3) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	I	1167	GLU	N-CA-C	5.85	126.79	111.00
6	L	149	ASP	CB-CG-OD2	5.24	123.01	118.30
8	P	36	DT	O4'-C4'-C3'	-5.22	102.41	104.50

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	I	1165	SER	Peptide
3	I	1166	ASP	Peptide
3	I	1240	ASP	Peptide
3	I	247	ARG	Peptide
4	J	47	ARG	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	N	571	0	556	50	0
2	G	1775	0	1803	131	0
2	H	1668	0	1702	175	0
2	M	572	0	602	61	0
3	I	10567	0	10585	1020	0
4	J	10433	0	10625	1022	0
5	K	577	0	588	53	0
6	L	4277	0	4325	530	0
7	O	863	0	471	74	0
8	P	752	0	426	74	0
9	J	2	0	0	0	0
9	N	1	0	0	0	0
10	I	27	39	39	7	0
10	J	27	39	38	4	0
10	L	27	39	37	3	0
10	N	27	39	38	4	0
11	J	1	0	0	0	0
All	All	32167	156	31835	2955	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 46.

All (2955) 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)
10:L:701:1N7:C19	10:L:701:1N7:C3	1.83	1.57
10:N:102:1N7:C19	10:N:102:1N7:C3	1.83	1.51
10:I:1401:1N7:C3	10:I:1401:1N7:C19	1.82	1.51
10:J:1504:1N7:C19	10:J:1504:1N7:C3	1.83	1.50
6:L:284:GLU:HA	6:L:287:ILE:HB	1.36	1.07
4:J:1167:LYS:HB3	4:J:1174:ARG:HD3	1.36	1.06
3:I:1164:PHE:HB3	3:I:1165:SER:HB2	1.42	1.02
3:I:1258:PRO:HG2	4:J:346:ARG:HB2	1.40	1.01
2:G:61:ILE:HG22	2:G:142:MET:HB3	1.43	1.01
4:J:937:ILE:HD11	4:J:1134:ILE:HG12	1.41	1.01
6:L:385:ARG:HD2	7:O:55:DC:H5'	1.39	1.01
3:I:839:VAL:HA	3:I:1049:ILE:HG22	1.42	1.01
6:L:313:ASP:HB3	6:L:317:ASN:HB2	1.42	1.01
6:L:567:MET:HG3	6:L:569:THR:HB	1.42	1.00
6:L:248:GLU:HA	6:L:251:LYS:HE3	1.41	1.00
4:J:937:ILE:O	4:J:1133:ASP:OD1	1.81	0.99
3:I:221:LEU:HD23	3:I:336:LEU:HD11	1.45	0.99
4:J:964:LYS:HB3	4:J:977:SER:HB3	1.42	0.99
4:J:1105:ALA:HA	4:J:1124:ILE:HG12	1.43	0.98
6:L:48:ILE:HG23	6:L:55:VAL:HG11	1.44	0.98
2:G:45:ARG:HD2	2:H:38:THR:HB	1.44	0.98
2:H:28:LEU:HD23	2:H:31:LEU:HD21	1.45	0.98
3:I:685:MET:HG3	3:I:1235:LEU:HD11	1.45	0.98
4:J:937:ILE:HG12	4:J:1134:ILE:O	1.61	0.98
4:J:557:LYS:HB2	4:J:563:LEU:HD23	1.46	0.97
3:I:727:VAL:HG23	3:I:732:ILE:HG12	1.44	0.97
3:I:998:LEU:HD13	3:I:1015:ALA:HA	1.47	0.97
6:L:126:GLY:HA3	6:L:372:ALA:HB2	1.47	0.96
6:L:161:LEU:HD23	6:L:162:ILE:HG23	1.48	0.95
3:I:732:ILE:HD11	3:I:769:PRO:HB3	1.45	0.95
3:I:317:LEU:HB2	3:I:321:LEU:HB2	1.49	0.95
3:I:750:ILE:HG21	3:I:966:ILE:HD12	1.49	0.94
2:H:59:VAL:HG22	2:H:144:ILE:HG13	1.48	0.94
4:J:369:PRO:HG2	4:J:372:MET:HB2	1.46	0.94
6:L:444:ALA:HB1	6:L:457:ILE:HD13	1.50	0.94
4:J:937:ILE:HD11	4:J:1134:ILE:CG1	1.98	0.94
4:J:51:PRO:HD2	4:J:71:LEU:HD21	1.50	0.94
3:I:59:ILE:HG23	3:I:476:LYS:HE2	1.48	0.93
4:J:425:ARG:HG2	4:J:427:PRO:HD2	1.46	0.93
4:J:1026:PRO:HA	4:J:1123:ARG:HA	1.48	0.93
4:J:1060:VAL:HG22	4:J:1107:VAL:H	1.31	0.93
4:J:26:SER:HB3	4:J:29:MET:HG3	1.48	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:321:LEU:HA	3:I:324:LYS:HG2	1.50	0.92
4:J:937:ILE:C	4:J:1133:ASP:OD1	2.07	0.92
3:I:463:GLN:HG2	3:I:505:PHE:HB2	1.48	0.92
4:J:72:CYS:HB3	4:J:88:CYS:HB3	1.49	0.92
4:J:1089:LEU:HA	4:J:1096:PRO:HA	1.52	0.92
4:J:1179:PRO:HD3	4:J:1184:ASP:HB3	1.52	0.92
6:L:336:GLU:HA	6:L:339:ARG:HD3	1.51	0.91
4:J:1079:LYS:HD2	4:J:1087:ASP:HB3	1.52	0.91
4:J:1314:LEU:HB3	4:J:1326:GLN:HE22	1.33	0.91
1:N:46:GLU:HA	1:N:49:ARG:HG3	1.50	0.91
3:I:1131:MET:HE2	3:I:1141:LEU:HD12	1.51	0.91
4:J:1144:LEU:HD11	4:J:1236:GLU:HG3	1.51	0.90
4:J:975:ILE:HD12	4:J:980:THR:HG21	1.54	0.90
4:J:1036:ARG:HG3	4:J:1081:VAL:HG21	1.54	0.90
4:J:114:ILE:HD11	4:J:311:ARG:HB2	1.53	0.89
6:L:76:ALA:HA	6:L:79:ALA:HB3	1.54	0.88
6:L:135:ALA:HA	6:L:141:ILE:HD11	1.54	0.88
4:J:519:ASN:HB2	4:J:709:ARG:HB2	1.56	0.88
4:J:969:SER:HB2	4:J:1119:ASP:HA	1.56	0.88
4:J:1172:LYS:HD3	4:J:1189:MET:HB3	1.56	0.88
4:J:1067:ARG:HD3	4:J:1072:LYS:HG3	1.55	0.88
3:I:237:LEU:HD11	3:I:322:LEU:HD21	1.52	0.87
4:J:950:ILE:HD12	4:J:982:LEU:HD22	1.56	0.87
4:J:1026:PRO:HB3	4:J:1123:ARG:HG2	1.55	0.87
6:L:151:VAL:HG22	6:L:156:ALA:HB3	1.54	0.87
4:J:1029:THR:HA	4:J:1099:TYR:HE2	1.39	0.87
4:J:1050:THR:HA	4:J:1057:SER:HA	1.57	0.87
2:H:133:LEU:HD21	2:H:138:ALA:HB3	1.56	0.87
4:J:126:LEU:HD11	4:J:223:LEU:HD13	1.56	0.86
6:L:112:THR:HG23	6:L:115:GLY:HA3	1.57	0.86
4:J:368:LEU:HD23	4:J:373:ALA:HB2	1.57	0.86
2:H:19:VAL:HB	2:H:23:HIS:HB3	1.56	0.86
2:M:282:VAL:HB	2:M:316:MET:HB2	1.55	0.86
2:H:13:LEU:HD22	2:H:28:LEU:HD12	1.56	0.86
3:I:233:ARG:HD3	3:I:238:GLN:HB2	1.57	0.86
3:I:288:PRO:HG2	3:I:291:TYR:HB2	1.58	0.86
4:J:1062:LEU:HB3	4:J:1066:GLU:HB3	1.56	0.86
2:G:43:LEU:HD13	2:G:217:ILE:HD11	1.57	0.85
3:I:689:ALA:HB2	3:I:1233:LEU:HD23	1.59	0.85
2:M:270:LEU:HB3	2:M:275:ILE:HB	1.57	0.85
3:I:980:VAL:HA	3:I:984:VAL:HG23	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:157:ARG:HB3	6:L:160:ASP:HB2	1.58	0.85
6:L:551:LEU:HB2	6:L:556:ALA:HB2	1.57	0.85
4:J:322:ARG:HH12	6:L:510:PRO:HG3	1.42	0.85
6:L:231:THR:HG21	6:L:249:ILE:HG13	1.59	0.85
6:L:149:ASP:OD1	6:L:225:ARG:NH2	2.10	0.84
1:N:8:ALA:HB2	4:J:786:THR:HG21	1.57	0.84
4:J:153:ASN:HB3	4:J:154:LEU:HD12	1.60	0.84
6:L:395:THR:HA	6:L:404:LEU:HD11	1.59	0.84
4:J:131:PRO:HG2	4:J:134:ASP:HB2	1.59	0.84
4:J:252:LEU:HG	4:J:262:THR:HG22	1.59	0.84
4:J:932:MET:HG3	4:J:933:ARG:HG2	1.59	0.84
2:H:213:PRO:HA	2:H:216:ALA:HB3	1.60	0.84
3:I:257:ALA:HB2	3:I:285:ILE:HG22	1.58	0.83
3:I:490:GLN:HE21	6:L:472:GLN:HB3	1.42	0.83
4:J:198:CYS:HB3	4:J:224:LEU:HD22	1.61	0.83
4:J:573:THR:HG22	4:J:575:GLY:H	1.42	0.83
3:I:1120:ALA:HB1	3:I:1198:LEU:HB3	1.59	0.83
3:I:560:PRO:HB2	4:J:776:THR:HG21	1.60	0.82
2:G:102:LEU:HD22	2:G:115:ILE:HG13	1.62	0.82
6:L:479:THR:HG23	6:L:482:GLU:H	1.44	0.82
3:I:826:ASP:OD1	3:I:829:THR:OG1	1.96	0.82
3:I:558:VAL:HG11	3:I:573:ASN:HB3	1.62	0.82
4:J:325:LYS:HD3	6:L:508:GLU:HG2	1.60	0.82
6:L:136:GLU:HB3	6:L:361:ILE:HG12	1.62	0.81
4:J:355:ILE:HG21	4:J:466:MET:HG2	1.61	0.81
4:J:245:LEU:HD21	4:J:327:LEU:HD21	1.60	0.81
3:I:811:ASN:HA	3:I:815:SER:HB2	1.62	0.81
4:J:474:LEU:HB3	5:K:28:ARG:HH12	1.44	0.81
6:L:452:ILE:HG13	6:L:457:ILE:HD11	1.63	0.81
8:P:67:DT:H5''	2:M:298:LYS:HB2	1.62	0.81
7:O:26:DT:H2''	7:O:27:DT:H5'	1.60	0.81
7:O:44:DA:H1'	7:O:45:DA:H5'	1.63	0.81
6:L:157:ARG:HE	6:L:159:SER:HB3	1.45	0.81
3:I:303:ASP:HB3	3:I:308:GLU:H	1.46	0.80
4:J:826:ILE:HG12	4:J:831:VAL:HA	1.62	0.80
4:J:1047:THR:HG23	4:J:1049:GLN:HG3	1.63	0.80
6:L:426:LYS:HB3	7:O:52:DA:H5'	1.62	0.80
3:I:1142:ARG:HH21	3:I:1165:SER:HB3	1.46	0.80
6:L:118:ASP:HA	6:L:121:LYS:HE3	1.64	0.80
6:L:287:ILE:HA	6:L:337:VAL:HG13	1.63	0.80
3:I:953:LEU:HD22	3:I:1033:ARG:HG3	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:P:60:DA:H2'	8:P:61:DT:H71	1.64	0.80
3:I:493:ILE:O	6:L:472:GLN:NE2	2.15	0.80
4:J:388:ARG:HB3	4:J:390:LEU:HD13	1.63	0.80
3:I:5:TYR:HA	3:I:8:LYS:HD2	1.62	0.79
6:L:583:THR:HG22	6:L:585:GLU:H	1.47	0.79
8:P:54:DT:H2''	8:P:55:DT:H5'	1.62	0.79
4:J:839:VAL:HG12	4:J:864:LEU:HD12	1.63	0.79
3:I:1297:ASP:OD2	3:I:1300:GLY:N	2.13	0.79
4:J:1061:VAL:HG21	4:J:1101:LEU:HB2	1.62	0.79
3:I:237:LEU:HB2	3:I:287:VAL:HG22	1.65	0.79
3:I:992:LEU:HD11	3:I:1000:LEU:HD11	1.63	0.79
4:J:1221:LEU:HD12	4:J:1229:VAL:HG11	1.65	0.79
4:J:821:MET:HE1	4:J:879:ALA:HA	1.63	0.79
4:J:1046:ILE:HD11	4:J:1059:LEU:HD13	1.65	0.79
6:L:292:VAL:HA	6:L:297:MET:HB3	1.65	0.79
2:G:59:VAL:HG12	2:G:144:ILE:HG23	1.65	0.78
2:H:102:LEU:HD21	2:H:115:ILE:HG23	1.65	0.78
3:I:1161:LEU:HG	3:I:1164:PHE:HD2	1.48	0.78
4:J:925:GLU:HG3	4:J:926:PRO:HD3	1.63	0.78
4:J:1275:LEU:HB3	4:J:1278:GLU:HB2	1.64	0.78
6:L:406:GLN:HA	6:L:409:ASN:HD22	1.47	0.78
2:H:62:ASP:OD1	2:H:141:SER:N	2.14	0.78
5:K:38:LEU:HD11	5:K:67:ARG:HH22	1.48	0.78
6:L:134:VAL:HG22	6:L:273:MET:HE1	1.66	0.78
7:O:26:DT:H2'	7:O:27:DT:H71	1.66	0.78
3:I:589:THR:OG1	3:I:659:GLN:OE1	2.02	0.78
1:N:6:ASP:OD1	3:I:678:ARG:NH2	2.17	0.77
2:H:155:ALA:N	2:H:174:ASP:OD1	2.17	0.77
3:I:557:ARG:HB3	3:I:587:LEU:HD13	1.65	0.77
3:I:1165:SER:OG	3:I:1166:ASP:N	2.17	0.77
4:J:279:LEU:HD11	4:J:296:LYS:HG2	1.65	0.77
3:I:238:GLN:HA	3:I:286:GLU:HA	1.65	0.77
3:I:519:ASN:HD21	3:I:796:LEU:HD23	1.50	0.77
3:I:1245:ALA:HB1	4:J:376:LEU:HD21	1.65	0.77
6:L:595:LEU:O	6:L:599:ARG:N	2.18	0.77
4:J:1156:LEU:HD12	4:J:1209:VAL:HA	1.67	0.77
5:K:3:ARG:NH2	5:K:5:THR:O	2.17	0.77
6:L:392:LYS:HE3	7:O:56:DC:H4'	1.67	0.77
3:I:1308:ILE:HG21	4:J:379:PRO:HB2	1.66	0.77
6:L:280:VAL:HG21	6:L:355:ILE:HG21	1.66	0.77
3:I:216:THR:HG23	3:I:219:GLN:HE22	1.50	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:255:ILE:HG22	3:I:262:TYR:HB2	1.65	0.77
2:G:14:VAL:HG21	2:G:29:GLU:HB2	1.67	0.76
2:G:11:PRO:HA	2:G:30:PRO:HD2	1.67	0.76
2:G:71:LYS:HE3	2:G:140:ILE:HG22	1.65	0.76
2:M:286:GLU:HG3	2:M:300:LEU:HD21	1.66	0.76
8:P:42:DT:H2''	8:P:43:DT:H72	1.67	0.76
3:I:120:GLN:NE2	3:I:490:GLN:OE1	2.19	0.76
2:G:102:LEU:HB2	2:G:142:MET:HG3	1.67	0.76
2:H:61:ILE:HD12	2:H:142:MET:HE1	1.67	0.76
3:I:560:PRO:O	4:J:780:ARG:NH2	2.18	0.76
4:J:74:LYS:NZ	4:J:86:GLU:OE1	2.18	0.76
7:O:42:DA:H1'	7:O:43:DA:H5'	1.67	0.76
3:I:933:VAL:HG22	3:I:1050:VAL:HG12	1.67	0.76
3:I:303:ASP:N	3:I:308:GLU:O	2.18	0.75
3:I:569:ILE:HD11	4:J:783:LEU:HD22	1.66	0.75
3:I:303:ASP:OD2	3:I:306:THR:OG1	2.02	0.75
4:J:679:TYR:OH	4:J:754:ILE:O	2.01	0.75
2:H:100:LEU:HB2	2:H:144:ILE:HG22	1.66	0.75
6:L:286:LEU:HD23	6:L:340:ALA:HB2	1.67	0.75
3:I:848:GLU:HG2	3:I:888:THR:HG22	1.66	0.75
3:I:771:VAL:HG11	3:I:783:LEU:HD13	1.69	0.75
4:J:950:ILE:HG12	4:J:1018:ALA:HB3	1.67	0.75
6:L:132:CYS:O	6:L:136:GLU:N	2.20	0.74
4:J:930:LEU:HD23	4:J:1244:GLN:HG2	1.69	0.74
4:J:975:ILE:HD13	4:J:1003:LEU:HD11	1.69	0.74
6:L:366:SER:HA	6:L:369:GLU:HB3	1.69	0.74
3:I:231:GLU:HG2	3:I:332:ARG:HA	1.69	0.74
3:I:889:PRO:HA	3:I:913:VAL:HA	1.69	0.74
6:L:80:ALA:HA	6:L:83:VAL:HG12	1.68	0.74
3:I:120:GLN:HE22	3:I:490:GLN:HB2	1.52	0.74
3:I:187:GLU:OE1	3:I:197:ARG:NE	2.19	0.74
3:I:1176:LEU:HD22	3:I:1181:PRO:HD3	1.69	0.74
5:K:53:GLU:HG3	5:K:59:ILE:HD12	1.68	0.74
3:I:931:VAL:HG22	3:I:1052:VAL:HG22	1.69	0.74
4:J:1263:LYS:HE3	4:J:1315:ALA:HB1	1.68	0.74
6:L:150:ARG:O	6:L:155:GLU:N	2.20	0.74
6:L:478:PRO:HB2	6:L:483:LEU:HD11	1.69	0.74
4:J:891:ASP:OD1	4:J:1286:LYS:NZ	2.21	0.74
4:J:1346:GLY:O	4:J:1350:ASN:ND2	2.21	0.74
4:J:482:ALA:O	5:K:16:ARG:NH2	2.21	0.73
4:J:1265:THR:O	4:J:1303:SER:N	2.20	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:838:CYS:HB2	3:I:918:LEU:HD22	1.70	0.73
4:J:180:MET:SD	4:J:293:ARG:NH2	2.61	0.73
4:J:582:ILE:HD13	4:J:627:THR:HG21	1.71	0.73
3:I:764:CYS:SG	3:I:766:ASN:ND2	2.61	0.73
4:J:516:ASP:HB2	4:J:547:ARG:HE	1.53	0.73
8:P:64:DA:H2''	8:P:65:DT:H5''	1.69	0.73
4:J:1160:SER:HA	4:J:1205:GLU:HA	1.70	0.73
6:L:76:ALA:O	6:L:80:ALA:N	2.18	0.73
4:J:111:THR:OG1	4:J:300:GLN:OE1	2.07	0.73
2:H:33:ARG:NH1	2:H:197:ASP:OD2	2.21	0.73
6:L:555:GLU:HA	6:L:558:VAL:HG12	1.71	0.73
2:M:304:LYS:HA	2:M:307:LEU:HD12	1.71	0.73
5:K:13:ILE:HD11	5:K:19:LEU:HA	1.70	0.73
4:J:291:ILE:HD13	6:L:409:ASN:HB3	1.69	0.72
6:L:548:LEU:HA	6:L:551:LEU:HG	1.71	0.72
2:H:82:LEU:HG	2:H:173:VAL:HG12	1.70	0.72
4:J:661:VAL:HG12	4:J:682:VAL:HG23	1.69	0.72
6:L:250:LEU:HD12	6:L:253:SER:HB3	1.71	0.72
3:I:1101:LEU:HD21	4:J:508:LEU:HD22	1.70	0.72
4:J:56:LEU:O	4:J:250:ARG:NH2	2.22	0.72
3:I:436:ARG:O	3:I:436:ARG:NH1	2.23	0.72
4:J:34:SER:OG	4:J:36:GLY:O	2.06	0.72
4:J:132:LEU:HD23	4:J:136:GLU:HG3	1.70	0.72
3:I:12:ARG:NH1	3:I:1182:ILE:O	2.22	0.72
3:I:1286:THR:N	4:J:479:GLU:OE1	2.21	0.72
4:J:1046:ILE:HD12	4:J:1059:LEU:HD22	1.72	0.72
2:G:113:ALA:HB2	2:G:126:PRO:HB3	1.71	0.72
3:I:434:ASP:HB2	3:I:439:LYS:HE2	1.71	0.72
4:J:364:HIS:HB3	4:J:487:THR:HG21	1.71	0.72
1:N:52:PHE:HB2	1:N:55:VAL:CG2	2.19	0.72
4:J:1029:THR:HG22	4:J:1119:ASP:H	1.55	0.72
4:J:161:THR:O	4:J:165:TYR:N	2.19	0.72
3:I:252:SER:O	3:I:265:LYS:NZ	2.22	0.72
3:I:100:LEU:HD12	3:I:493:ILE:HD11	1.72	0.71
3:I:1103:VAL:HG21	4:J:639:VAL:HG21	1.70	0.71
3:I:1131:MET:HA	3:I:1136:GLN:HG2	1.71	0.71
4:J:1175:LEU:HD11	4:J:1200:GLU:HB3	1.73	0.71
4:J:1311:LYS:HD3	4:J:1314:LEU:HD21	1.71	0.71
1:N:42:ASN:OD1	3:I:267:ARG:NH1	2.21	0.71
4:J:1031:VAL:HG12	4:J:1032:SER:H	1.56	0.71
4:J:813:ASP:HA	4:J:895:CYS:SG	2.31	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:974:VAL:HA	4:J:1003:LEU:HG	1.71	0.71
4:J:1036:ARG:HB2	4:J:1081:VAL:HG11	1.71	0.71
4:J:259:ARG:HE	6:L:502:LYS:HE3	1.54	0.71
6:L:234:THR:O	6:L:242:HIS:N	2.24	0.71
6:L:284:GLU:O	6:L:288:MET:N	2.21	0.71
2:H:183:ILE:HD11	2:H:203:ILE:HG22	1.71	0.71
4:J:1195:GLN:N	4:J:1212:ASP:OD1	2.23	0.71
8:P:43:DT:H1'	8:P:44:DT:H5'	1.73	0.71
1:N:64:TYR:HE2	3:I:341:LEU:HB2	1.56	0.71
3:I:277:LEU:O	3:I:281:ASP:N	2.23	0.71
3:I:561:ILE:HD11	3:I:665:ALA:HB1	1.73	0.71
4:J:287:ALA:HB1	4:J:288:PRO:HD2	1.73	0.71
6:L:151:VAL:HG12	6:L:158:LEU:HD23	1.71	0.71
1:N:48:ARG:NH2	1:N:62:GLN:OE1	2.24	0.70
2:G:118:ASP:HB3	2:G:121:VAL:HG12	1.73	0.70
3:I:812:PHE:HZ	4:J:503:SER:HB2	1.56	0.70
3:I:1164:PHE:HB3	3:I:1165:SER:CB	2.21	0.70
4:J:198:CYS:HB3	4:J:224:LEU:CD2	2.21	0.70
2:H:47:LEU:HD22	2:H:180:VAL:HG11	1.73	0.70
3:I:251:ALA:N	3:I:267:ARG:O	2.18	0.70
4:J:44:ILE:HG22	4:J:51:PRO:HA	1.72	0.70
3:I:634:VAL:HG11	3:I:650:VAL:HG11	1.73	0.70
4:J:201:LEU:HD13	4:J:204:GLU:HB2	1.73	0.70
4:J:1064:SER:HA	4:J:1067:ARG:HG2	1.73	0.70
4:J:334:LYS:O	4:J:340:GLN:HB2	1.92	0.70
4:J:982:LEU:N	4:J:995:TYR:O	2.24	0.70
4:J:1089:LEU:CA	4:J:1096:PRO:HA	2.21	0.70
2:G:52:PRO:HB3	2:H:5:VAL:HG21	1.72	0.70
3:I:1248:THR:HG21	6:L:531:PRO:HG2	1.73	0.70
4:J:417:ARG:NH1	5:K:43:ASN:O	2.25	0.70
4:J:748:ALA:HB2	4:J:754:ILE:HG12	1.73	0.70
4:J:1164:SER:HA	4:J:1200:GLU:HB2	1.73	0.70
3:I:1243:MET:HE3	4:J:445:LYS:HD3	1.74	0.70
4:J:822:MET:SD	4:J:838:ARG:NH2	2.64	0.70
2:G:234:LEU:HD12	2:H:218:ARG:HE	1.57	0.70
3:I:42:ASP:OD2	3:I:46:GLN:N	2.18	0.70
3:I:148:GLN:NE2	3:I:533:LEU:O	2.24	0.70
4:J:984:LEU:HB3	4:J:993:GLU:H	1.57	0.70
4:J:984:LEU:N	4:J:993:GLU:O	2.25	0.70
3:I:1240:ASP:HB3	4:J:445:LYS:HD2	1.74	0.69
2:G:150:ARG:NH1	2:H:5:VAL:O	2.26	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:59:ILE:O	3:I:68:LEU:N	2.23	0.69
4:J:1029:THR:HG23	4:J:1118:GLY:H	1.57	0.69
3:I:1321:GLU:OE2	4:J:99:ARG:NE	2.22	0.69
4:J:950:ILE:HD13	4:J:997:VAL:HG22	1.73	0.69
5:K:3:ARG:HB2	5:K:48:VAL:HG13	1.74	0.69
6:L:114:GLU:HA	6:L:117:ILE:HD13	1.73	0.69
6:L:385:ARG:NH1	7:O:55:DC:OP2	2.25	0.69
6:L:539:SER:O	6:L:543:ALA:N	2.20	0.69
2:H:154:PRO:O	2:H:158:ARG:NH1	2.25	0.69
6:L:283:GLN:O	6:L:287:ILE:N	2.24	0.69
2:G:104:LYS:NZ	2:G:114:ASP:OD2	2.19	0.69
3:I:960:LEU:HD22	3:I:1029:LEU:HB2	1.73	0.69
4:J:1138:LEU:HB3	4:J:1139:PRO:HD3	1.74	0.69
3:I:706:ARG:NH1	3:I:791:LEU:O	2.24	0.69
3:I:998:LEU:HB3	3:I:1015:ALA:HB2	1.75	0.69
7:O:23:DC:H2'	7:O:24:DC:C6	2.26	0.69
3:I:542:ARG:NH1	3:I:542:ARG:O	2.22	0.69
3:I:1024:GLU:HA	3:I:1027:LYS:HE2	1.74	0.69
4:J:1067:ARG:NE	4:J:1072:LYS:HA	2.08	0.69
3:I:12:ARG:NH2	3:I:793:GLU:OE2	2.24	0.69
3:I:726:TYR:HA	3:I:773:LEU:HD11	1.74	0.69
4:J:701:LEU:HD21	4:J:723:TYR:HB2	1.75	0.69
4:J:968:ASN:HA	4:J:1118:GLY:HA3	1.75	0.69
2:G:184:ALA:HB2	3:I:1091:GLY:HA3	1.75	0.69
3:I:38:PHE:HA	3:I:48:GLY:HA2	1.75	0.69
3:I:346:TYR:O	3:I:350:THR:OG1	2.11	0.69
6:L:351:THR:HB	6:L:358:VAL:HG21	1.74	0.69
3:I:864:LYS:HD2	3:I:875:ALA:HB1	1.74	0.68
4:J:478:LEU:HB3	5:K:20:VAL:HG13	1.74	0.68
4:J:960:LEU:HB3	4:J:963:VAL:HB	1.75	0.68
6:L:494:ILE:O	6:L:497:VAL:HG12	1.93	0.68
2:G:208:ASN:OD1	2:G:210:THR:OG1	2.05	0.68
3:I:818:VAL:HG22	3:I:1096:ILE:HG12	1.75	0.68
6:L:583:THR:HB	6:L:586:ARG:HB3	1.75	0.68
3:I:971:LEU:HD13	3:I:1018:TYR:HD1	1.59	0.68
2:G:73:GLY:O	2:G:134:THR:N	2.27	0.68
3:I:146:VAL:HG23	3:I:511:LEU:HD22	1.74	0.68
3:I:994:ARG:HG2	3:I:997:TRP:CH2	2.29	0.68
3:I:1121:ALA:HB2	3:I:1182:ILE:HD11	1.73	0.68
4:J:1281:GLU:OE1	4:J:1283:SER:N	2.22	0.68
6:L:327:SER:HA	6:L:330:LEU:HG	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:486:ARG:HG3	6:L:487:MET:HE3	1.75	0.68
6:L:333:VAL:HG22	6:L:337:VAL:HG23	1.74	0.68
7:O:16:DC:H2''	7:O:17:DA:H5'	1.74	0.68
4:J:901:ARG:NH1	4:J:906:GLY:O	2.26	0.68
4:J:1029:THR:HA	4:J:1099:TYR:CE2	2.28	0.68
3:I:617:ALA:N	3:I:652:TYR:O	2.19	0.68
6:L:263:PRO:HA	6:L:266:PHE:HB3	1.75	0.68
3:I:842:ASP:HB3	3:I:1047:LEU:HD11	1.76	0.68
4:J:502:PRO:HB3	4:J:506:VAL:HG23	1.75	0.68
4:J:984:LEU:HB3	4:J:993:GLU:N	2.09	0.68
4:J:1308:GLY:O	4:J:1312:ALA:N	2.23	0.68
2:G:14:VAL:HG12	2:G:15:ASP:H	1.59	0.68
3:I:404:LYS:NZ	3:I:450:ASN:OD1	2.25	0.68
4:J:418:GLU:HG3	5:K:48:VAL:HG21	1.75	0.68
6:L:406:GLN:O	6:L:410:ILE:HG12	1.93	0.68
6:L:455:HIS:NE2	7:O:44:DA:OP2	2.18	0.68
4:J:973:LEU:HB3	4:J:1003:LEU:HD12	1.75	0.67
2:M:250:ASP:HB3	2:M:253:LEU:HD23	1.76	0.67
2:G:26:VAL:HG22	2:G:203:ILE:HB	1.75	0.67
3:I:138:ILE:HG13	3:I:143:ARG:HD3	1.74	0.67
4:J:492:SER:OG	4:J:495:ASN:O	2.11	0.67
4:J:1077:ALA:HB2	4:J:1100:PHE:HA	1.77	0.67
2:G:61:ILE:HG13	2:G:64:VAL:HB	1.76	0.67
3:I:233:ARG:O	3:I:238:GLN:NE2	2.27	0.67
8:P:57:DT:H2''	8:P:58:DC:H5'	1.76	0.67
3:I:406:ASN:ND2	3:I:413:GLU:O	2.28	0.67
4:J:1079:LYS:HE3	4:J:1081:VAL:HG12	1.76	0.67
4:J:502:PRO:HB3	4:J:506:VAL:CG2	2.24	0.67
8:P:43:DT:H2''	8:P:44:DT:H5'	1.76	0.67
3:I:256:GLU:HB2	3:I:261:VAL:HG22	1.77	0.67
4:J:1105:ALA:HA	4:J:1124:ILE:CG1	2.23	0.67
6:L:290:LEU:O	6:L:294:GLN:NE2	2.27	0.67
3:I:1142:ARG:HG3	3:I:1161:LEU:CD2	2.25	0.67
3:I:494:ASN:HA	6:L:472:GLN:HE22	1.60	0.67
6:L:81:ALA:HA	6:L:84:LEU:HG	1.76	0.67
3:I:149:LEU:HD13	3:I:453:ILE:HG12	1.77	0.67
6:L:269:LEU:O	6:L:273:MET:N	2.23	0.66
6:L:305:LEU:HD13	6:L:319:ALA:HB2	1.76	0.66
6:L:583:THR:HG22	6:L:585:GLU:N	2.10	0.66
3:I:962:GLU:O	3:I:966:ILE:HG12	1.95	0.66
8:P:60:DA:H2''	8:P:61:DT:H5'	1.75	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:73:GLY:N	3:I:728:ASP:OD2	2.29	0.66
3:I:1155:VAL:O	3:I:1158:LYS:NZ	2.28	0.66
10:I:1401:1N7:C3	10:I:1401:1N7:C2	2.69	0.66
4:J:902:ASP:OD2	4:J:1249:ASN:ND2	2.28	0.66
3:I:607:SER:OG	3:I:610:GLU:OE1	2.11	0.66
3:I:856:ASN:HA	6:L:613:ASP:O	1.96	0.66
6:L:463:LEU:O	6:L:467:SER:N	2.27	0.66
2:H:215:GLU:HA	2:H:218:ARG:HG2	1.76	0.66
3:I:145:ILE:HG21	3:I:456:VAL:HG23	1.76	0.66
3:I:402:ARG:NE	3:I:417:SER:O	2.28	0.66
3:I:1109:ILE:HD11	4:J:740:LEU:HD11	1.77	0.66
3:I:1157:GLN:O	3:I:1158:LYS:NZ	2.23	0.66
4:J:836:ARG:HD2	4:J:869:CYS:SG	2.36	0.66
4:J:964:LYS:O	4:J:976:THR:OG1	2.10	0.66
4:J:1046:ILE:HA	4:J:1062:LEU:HD12	1.78	0.66
5:K:36:ASP:HB2	5:K:37:PRO:HD2	1.78	0.66
3:I:560:PRO:CB	4:J:776:THR:HG21	2.25	0.66
3:I:988:LYS:HA	3:I:991:LYS:HG3	1.75	0.66
4:J:20:ILE:HG13	4:J:1344:LEU:HD21	1.78	0.66
4:J:835:LEU:HD13	4:J:878:ASP:HA	1.78	0.66
4:J:959:LYS:HB3	4:J:985:ILE:HD11	1.77	0.66
4:J:1074:LEU:O	4:J:1075:ARG:NH1	2.27	0.66
4:J:1152:GLU:OE2	4:J:1194:ARG:NE	2.29	0.66
4:J:368:LEU:HG	4:J:369:PRO:HD2	1.77	0.66
4:J:1062:LEU:HB3	4:J:1066:GLU:CB	2.25	0.66
6:L:468:ARG:NH1	8:P:35:DA:OP1	2.25	0.66
3:I:1257:GLN:HE22	4:J:345:LYS:HE2	1.59	0.66
2:G:180:VAL:HA	2:G:207:THR:HG22	1.78	0.66
3:I:65:ASN:O	3:I:105:TYR:N	2.20	0.66
1:N:52:PHE:O	1:N:55:VAL:HG23	1.96	0.65
3:I:808:ASN:OD1	3:I:1216:ARG:NH2	2.29	0.65
3:I:992:LEU:HB2	3:I:993:PRO:HD2	1.77	0.65
3:I:998:LEU:HD13	3:I:1015:ALA:CA	2.24	0.65
6:L:478:PRO:HB2	6:L:483:LEU:CD1	2.27	0.65
3:I:230:PHE:N	3:I:333:ILE:O	2.29	0.65
3:I:819:SER:HB2	3:I:1085:MET:HG3	1.76	0.65
4:J:926:PRO:HG2	4:J:1248:ILE:HD11	1.77	0.65
4:J:952:VAL:N	4:J:1015:GLU:O	2.27	0.65
6:L:157:ARG:HG2	6:L:160:ASP:H	1.59	0.65
3:I:254:ASP:HB3	3:I:265:LYS:HG3	1.78	0.65
3:I:302:ILE:HG22	3:I:309:LEU:HA	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:253:VAL:HG11	6:L:523:ILE:HD13	1.79	0.65
4:J:1024:THR:HB	4:J:1123:ARG:HB3	1.77	0.65
4:J:1064:SER:HB3	4:J:1072:LYS:HD3	1.78	0.65
6:L:26:GLU:O	6:L:30:HIS:N	2.29	0.65
3:I:301:TYR:CE2	3:I:333:ILE:HA	2.31	0.65
3:I:906:PHE:CD2	6:L:611:LEU:HD11	2.30	0.65
3:I:1005:GLU:HG2	3:I:1006:GLU:OE1	1.97	0.65
4:J:884:SER:OG	4:J:886:VAL:HG12	1.95	0.65
4:J:1006:GLY:N	4:J:1009:GLU:OE2	2.26	0.65
6:L:133:SER:CB	6:L:365:MET:HB2	2.26	0.65
6:L:295:CYS:O	6:L:326:TRP:HB2	1.97	0.65
3:I:517:GLN:O	3:I:517:GLN:HG2	1.96	0.65
2:H:112:ALA:HB3	2:H:126:PRO:HA	1.77	0.65
3:I:972:PHE:HD1	3:I:975:ILE:HD12	1.61	0.65
4:J:367:GLY:H	4:J:448:GLN:HB2	1.62	0.65
4:J:1163:VAL:HG23	4:J:1177:ILE:HA	1.78	0.65
6:L:137:TYR:CZ	6:L:139:GLU:HB2	2.31	0.65
6:L:162:ILE:HD13	6:L:221:PHE:HE2	1.62	0.65
4:J:334:LYS:HA	4:J:339:ARG:HD3	1.79	0.65
6:L:277:MET:HA	6:L:280:VAL:HG12	1.78	0.65
3:I:565:GLU:OE1	3:I:684:ASN:ND2	2.30	0.65
4:J:363:LEU:HD23	4:J:487:THR:HG22	1.79	0.65
6:L:598:LEU:O	6:L:604:SER:OG	2.14	0.65
3:I:383:SER:O	3:I:387:ASN:ND2	2.29	0.65
3:I:901:LEU:HD22	6:L:565:ILE:HD11	1.78	0.65
4:J:20:ILE:HD12	4:J:1344:LEU:HD11	1.78	0.65
4:J:978:ARG:NH2	4:J:1197:ASN:O	2.30	0.65
3:I:237:LEU:HB2	3:I:287:VAL:CG2	2.27	0.65
4:J:423:LEU:HD12	4:J:468:VAL:HG12	1.79	0.65
4:J:982:LEU:HB3	4:J:995:TYR:HB2	1.77	0.65
4:J:1038:THR:HG21	4:J:1079:LYS:HD3	1.78	0.65
5:K:3:ARG:HH21	5:K:5:THR:H	1.42	0.65
2:H:158:ARG:HE	2:H:172:LEU:HD12	1.61	0.64
3:I:28:LEU:HD13	3:I:527:LYS:HD3	1.79	0.64
3:I:202:ARG:HA	6:L:29:ASP:OD1	1.97	0.64
3:I:974:ARG:O	3:I:978:VAL:HG23	1.97	0.64
4:J:1035:VAL:O	4:J:1112:GLY:N	2.25	0.64
8:P:61:DT:H1'	8:P:62:DG:H5'	1.79	0.64
2:H:57:THR:O	2:H:173:VAL:HG22	1.96	0.64
3:I:242:VAL:HB	3:I:245:ARG:HB2	1.79	0.64
3:I:716:ALA:HB3	3:I:784:ALA:HB3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:798:GLN:HB3	3:I:827:ARG:NH2	2.12	0.64
4:J:93:THR:HG22	4:J:94:GLN:H	1.60	0.64
2:H:86:LYS:NZ	2:H:174:ASP:HB2	2.13	0.64
6:L:593:LYS:HA	6:L:596:ARG:HG2	1.80	0.64
2:H:19:VAL:CB	2:H:23:HIS:HB3	2.27	0.64
3:I:611:GLU:OE2	3:I:637:ARG:NH2	2.30	0.64
3:I:976:ARG:O	3:I:980:VAL:HG23	1.98	0.64
3:I:1212:LEU:HD22	3:I:1225:VAL:CG2	2.27	0.64
10:I:1401:1N7:C3	10:I:1401:1N7:C18	2.70	0.64
6:L:487:MET:HB3	6:L:489:MET:CE	2.27	0.64
6:L:586:ARG:NH1	6:L:589:GLN:HB3	2.12	0.64
2:G:50:SER:HB2	2:G:150:ARG:HD2	1.80	0.64
3:I:303:ASP:HB3	3:I:308:GLU:N	2.11	0.64
3:I:1131:MET:HE2	3:I:1141:LEU:HA	1.79	0.64
6:L:409:ASN:O	6:L:413:MET:HG2	1.97	0.64
7:O:41:DT:H2"	7:O:42:DA:N7	2.13	0.64
3:I:387:ASN:HA	3:I:391:SER:HB3	1.79	0.64
3:I:772:SER:N	3:I:775:GLU:OE1	2.20	0.64
4:J:951:GLN:HA	4:J:1016:THR:HA	1.80	0.64
4:J:1061:VAL:HG21	4:J:1101:LEU:CB	2.28	0.64
6:L:117:ILE:HG23	6:L:421:TYR:CE1	2.33	0.64
6:L:274:ARG:HA	6:L:274:ARG:CZ	2.28	0.64
2:G:68:TYR:HB3	3:I:756:TYR:CD2	2.33	0.64
3:I:591:TYR:OH	3:I:637:ARG:NH2	2.31	0.64
3:I:864:LYS:O	3:I:871:VAL:HA	1.98	0.64
3:I:100:LEU:HD12	3:I:493:ILE:CD1	2.28	0.64
3:I:1209:GLN:NE2	3:I:1226:THR:OG1	2.31	0.64
4:J:176:PHE:CE2	4:J:178:ALA:HB3	2.33	0.64
4:J:1036:ARG:CG	4:J:1081:VAL:HG21	2.27	0.64
6:L:166:VAL:HG22	6:L:260:ARG:HG3	1.79	0.64
4:J:281:ARG:O	4:J:285:LEU:HG	1.98	0.64
2:M:298:LYS:O	2:M:302:GLU:HG2	1.98	0.64
1:N:56:THR:O	1:N:57:LEU:HD23	1.98	0.63
2:G:9:LEU:HD11	2:G:198:LEU:HD13	1.80	0.63
3:I:230:PHE:O	3:I:333:ILE:N	2.24	0.63
3:I:1212:LEU:HD22	3:I:1225:VAL:HG21	1.79	0.63
4:J:865:HIS:ND1	4:J:867:GLN:OE1	2.31	0.63
6:L:287:ILE:HG13	6:L:340:ALA:HB1	1.78	0.63
6:L:292:VAL:HG22	6:L:297:MET:HG2	1.80	0.63
3:I:426:ILE:HG22	3:I:430:LYS:HD2	1.80	0.63
3:I:1105:SER:HB3	4:J:731:ARG:HD3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:559:ALA:HB3	4:J:562:GLU:HB3	1.80	0.63
4:J:910:ASN:HB3	5:K:15:ASN:OD1	1.98	0.63
2:M:269:CYS:HB2	2:M:292:THR:HG21	1.78	0.63
1:N:9:TYR:OH	1:N:13:GLU:OE1	2.09	0.63
2:G:158:ARG:NH1	2:G:162:GLU:OE2	2.31	0.63
2:H:58:GLU:HA	2:H:172:LEU:HA	1.80	0.63
2:H:100:LEU:HB2	2:H:144:ILE:CG2	2.28	0.63
2:H:201:LEU:HG	2:H:203:ILE:HG13	1.79	0.63
3:I:58:PRO:HB3	3:I:69:GLN:HG2	1.80	0.63
3:I:317:LEU:HD11	3:I:322:LEU:HD13	1.80	0.63
4:J:603:LYS:O	4:J:607:THR:HG23	1.98	0.63
4:J:1079:LYS:HE3	4:J:1081:VAL:CG1	2.28	0.63
4:J:1205:GLU:N	4:J:1208:ASP:OD1	2.30	0.63
6:L:306:PHE:HA	6:L:315:TRP:HB2	1.80	0.63
3:I:210:LEU:HA	3:I:213:LEU:HD12	1.80	0.63
3:I:840:SER:HA	3:I:848:GLU:OE1	1.98	0.63
3:I:1073:LYS:HD2	4:J:462:ASP:HB2	1.80	0.63
4:J:325:LYS:CD	6:L:508:GLU:HG2	2.28	0.63
3:I:590:PRO:HG3	3:I:605:TYR:CE1	2.32	0.63
4:J:1314:LEU:HB3	4:J:1326:GLN:NE2	2.08	0.63
2:G:22:THR:HB	2:G:207:THR:O	1.98	0.63
6:L:130:VAL:HG22	6:L:365:MET:HG3	1.81	0.63
4:J:740:LEU:O	4:J:762:ASN:HB2	1.98	0.63
6:L:134:VAL:HG22	6:L:273:MET:CE	2.28	0.63
3:I:617:ALA:HA	3:I:636:CYS:SG	2.39	0.63
3:I:735:LYS:HA	3:I:748:ILE:HG22	1.80	0.63
3:I:1086:PRO:O	3:I:1094:VAL:HG12	1.98	0.63
4:J:1152:GLU:HB3	4:J:1214:PRO:HD2	1.80	0.63
6:L:525:ASP:OD1	6:L:526:THR:N	2.32	0.63
6:L:585:GLU:OE1	8:P:58:DC:N4	2.32	0.63
2:G:61:ILE:CG2	2:G:142:MET:HB3	2.25	0.63
3:I:302:ILE:HA	3:I:310:ILE:H	1.64	0.63
6:L:16:GLY:CA	6:L:22:LEU:HD11	2.28	0.63
6:L:27:VAL:HG11	6:L:45:ILE:HG12	1.81	0.63
6:L:123:ILE:O	6:L:127:ILE:HG23	1.99	0.63
7:O:39:DG:H1'	7:O:40:DC:C5'	2.29	0.63
4:J:58:CYS:HB3	4:J:61:ILE:HB	1.80	0.62
4:J:1318:SER:OG	4:J:1319:PHE:N	2.31	0.62
6:L:490:PRO:HD2	6:L:493:LYS:HE2	1.81	0.62
8:P:43:DT:C2'	8:P:44:DT:H5'	2.29	0.62
8:P:68:DG:OP1	2:M:265:ARG:HB3	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:690:VAL:CG2	3:I:1236:ASN:HB3	2.29	0.62
3:I:895:LEU:HD11	3:I:900:LYS:HG3	1.81	0.62
4:J:1263:LYS:HA	4:J:1281:GLU:HA	1.80	0.62
6:L:23:THR:HB	6:L:58:GLU:H	1.64	0.62
6:L:429:THR:HA	7:O:53:DT:C7	2.29	0.62
3:I:242:VAL:HB	3:I:245:ARG:CB	2.28	0.62
3:I:301:TYR:HB3	3:I:325:LEU:HD21	1.80	0.62
3:I:351:LEU:O	3:I:354:ASP:HB2	1.99	0.62
3:I:538:LEU:CD2	3:I:547:VAL:HG11	2.30	0.62
3:I:623:LEU:HA	3:I:630:VAL:HG13	1.82	0.62
3:I:852:ALA:O	3:I:854:ILE:HG13	2.00	0.62
4:J:719:PHE:HD1	4:J:724:MET:HE1	1.64	0.62
6:L:386:LEU:O	6:L:390:ILE:HG13	1.99	0.62
2:H:183:ILE:HD12	2:H:204:GLU:O	2.00	0.62
3:I:905:ILE:HA	6:L:595:LEU:HD12	1.81	0.62
4:J:1025:MET:N	4:J:1124:ILE:O	2.22	0.62
4:J:1158:GLU:OE1	4:J:1158:GLU:N	2.33	0.62
4:J:279:LEU:O	4:J:283:LEU:HG	1.98	0.62
6:L:149:ASP:O	6:L:153:ALA:N	2.26	0.62
3:I:66:SER:HB3	3:I:104:ILE:HG22	1.82	0.62
3:I:750:ILE:HG21	3:I:966:ILE:CD1	2.28	0.62
3:I:1142:ARG:HG3	3:I:1161:LEU:HD23	1.81	0.62
4:J:254:PRO:HA	4:J:260:PHE:HD2	1.65	0.62
4:J:909:ILE:HD11	4:J:913:GLU:HB3	1.82	0.62
7:O:39:DG:H1'	7:O:40:DC:H5'	1.80	0.62
3:I:149:LEU:HD22	3:I:530:ILE:HG21	1.82	0.62
3:I:172:TYR:HB3	3:I:432:LEU:HD11	1.81	0.62
3:I:361:SER:HA	3:I:364:VAL:HG22	1.81	0.62
4:J:42:GLU:OE2	6:L:451:ARG:NH1	2.32	0.62
4:J:1146:GLU:OE1	4:J:1308:GLY:HA3	2.00	0.62
6:L:426:LYS:CB	7:O:52:DA:H5'	2.30	0.62
3:I:59:ILE:N	3:I:68:LEU:O	2.21	0.62
3:I:1083:GLU:OE1	3:I:1083:GLU:N	2.30	0.62
4:J:260:PHE:CB	6:L:504:PRO:HB3	2.29	0.62
4:J:1155:ILE:O	4:J:1156:LEU:HD13	2.00	0.62
6:L:145:LEU:HD11	6:L:225:ARG:HA	1.82	0.62
6:L:291:CYS:HB3	6:L:297:MET:SD	2.40	0.62
6:L:326:TRP:HA	6:L:329:LYS:HD2	1.81	0.62
2:M:295:LEU:HD21	2:M:300:LEU:HB2	1.81	0.62
2:G:61:ILE:HD12	2:G:64:VAL:HG21	1.82	0.62
2:H:74:VAL:HG12	2:H:133:LEU:HA	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:120:GLN:HB3	3:I:489:PRO:HD2	1.82	0.62
3:I:289:VAL:HG11	3:I:319:LEU:HD12	1.81	0.62
3:I:371:ARG:HB3	3:I:374:GLU:OE2	1.99	0.62
4:J:405:GLU:O	4:J:408:VAL:HG22	2.00	0.62
10:J:1504:1N7:C3	10:J:1504:1N7:C2	2.72	0.62
2:M:313:SER:O	2:M:316:MET:HG3	2.00	0.62
4:J:133:ARG:O	4:J:137:ARG:HD3	2.01	0.61
4:J:958:ILE:HD11	4:J:1011:VAL:HG21	1.81	0.61
3:I:256:GLU:HA	3:I:261:VAL:HA	1.82	0.61
3:I:770:CYS:HB3	3:I:785:ASP:OD2	2.00	0.61
4:J:555:TYR:CE1	4:J:565:ALA:HB2	2.35	0.61
4:J:559:ALA:HB3	4:J:562:GLU:CB	2.30	0.61
6:L:292:VAL:HG11	6:L:299:LYS:HD2	1.82	0.61
7:O:37:DA:H2"	7:O:38:DG:C8	2.35	0.61
2:G:57:THR:HG21	2:G:147:GLN:HG2	1.83	0.61
3:I:60:GLN:HG2	3:I:61:SER:O	2.00	0.61
4:J:792:ASN:HB2	4:J:795:TYR:CD1	2.35	0.61
4:J:1035:VAL:HG21	4:J:1113:VAL:HB	1.82	0.61
6:L:426:LYS:N	7:O:52:DA:OP2	2.33	0.61
2:G:113:ALA:HB2	2:G:126:PRO:CB	2.30	0.61
2:G:226:GLU:HG2	2:H:10:LYS:CE	2.30	0.61
2:H:25:LYS:HG2	2:H:204:GLU:HG3	1.82	0.61
3:I:905:ILE:HG22	3:I:906:PHE:CD1	2.36	0.61
4:J:430:HIS:HD2	4:J:432:LEU:HB2	1.64	0.61
4:J:553:THR:HB	4:J:567:THR:HG22	1.82	0.61
4:J:1268:ASN:HA	4:J:1276:GLU:HG3	1.83	0.61
6:L:333:VAL:CG2	6:L:337:VAL:HG23	2.29	0.61
3:I:420:LEU:HD13	3:I:425:ILE:HD11	1.81	0.61
3:I:685:MET:CG	3:I:1235:LEU:HD11	2.26	0.61
3:I:911:SER:OG	3:I:912:ASP:N	2.33	0.61
4:J:957:SER:HB3	4:J:985:ILE:HB	1.83	0.61
6:L:148:TYR:HA	6:L:161:LEU:HD11	1.81	0.61
4:J:88:CYS:SG	4:J:90:VAL:HG12	2.41	0.61
4:J:961:SER:O	4:J:980:THR:HA	2.00	0.61
4:J:1052:GLU:HA	4:J:1055:GLY:HA2	1.81	0.61
4:J:1221:LEU:HA	4:J:1225:GLY:O	2.00	0.61
6:L:9:LEU:O	6:L:13:VAL:HG13	2.01	0.61
6:L:573:LEU:HB3	8:P:56:DG:OP2	2.00	0.61
6:L:583:THR:HB	6:L:586:ARG:CB	2.30	0.61
1:N:46:GLU:HA	1:N:49:ARG:CG	2.28	0.61
2:G:45:ARG:NH2	3:I:1215:GLY:O	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:102:LEU:HB2	2:G:142:MET:CG	2.31	0.61
3:I:700:VAL:O	3:I:1069:ARG:NH2	2.33	0.61
3:I:745:GLU:HG2	3:I:971:LEU:HD11	1.82	0.61
4:J:851:PRO:HD3	4:J:877:VAL:HG12	1.83	0.61
4:J:1021:ASP:OD1	4:J:1023:HIS:N	2.32	0.61
4:J:1061:VAL:HB	4:J:1105:ALA:HB3	1.82	0.61
2:H:211:ILE:HG12	2:H:215:GLU:OE1	2.01	0.61
3:I:153:PRO:O	3:I:401:GLY:HA2	2.00	0.61
3:I:249:GLU:O	3:I:268:ARG:HD3	2.00	0.61
3:I:409:LEU:HD12	3:I:427:ASP:HB3	1.82	0.61
4:J:110:PRO:HB2	4:J:182:ALA:HB1	1.83	0.61
5:K:56:GLU:OE1	5:K:58:LEU:HB2	2.00	0.61
8:P:49:DT:H2'	8:P:50:DT:H71	1.82	0.61
2:G:29:GLU:OE1	2:G:200:LYS:HG3	2.01	0.61
3:I:358:ASP:OD1	3:I:361:SER:HB3	2.01	0.61
3:I:803:ALA:HB2	3:I:1094:VAL:HG21	1.81	0.61
3:I:1105:SER:HB2	4:J:731:ARG:HG2	1.83	0.61
3:I:1164:PHE:HA	3:I:1168:GLU:OE1	2.01	0.61
6:L:586:ARG:NH1	6:L:586:ARG:O	2.33	0.61
3:I:434:ASP:HA	3:I:437:ASN:HB3	1.83	0.61
3:I:528:ARG:NH2	3:I:576:SER:O	2.32	0.61
4:J:40:LYS:HB3	4:J:42:GLU:OE1	2.00	0.61
4:J:52:GLU:HG3	4:J:53:ARG:H	1.66	0.61
4:J:254:PRO:HA	4:J:260:PHE:CD2	2.36	0.61
4:J:1163:VAL:HG23	4:J:1177:ILE:HG13	1.83	0.61
4:J:1175:LEU:CD1	4:J:1200:GLU:HB3	2.30	0.61
3:I:733:VAL:HG23	3:I:750:ILE:HG22	1.83	0.60
4:J:968:ASN:HB3	4:J:974:VAL:HG22	1.82	0.60
4:J:1042:ASP:OD1	4:J:1059:LEU:HD21	2.01	0.60
4:J:1194:ARG:CG	4:J:1212:ASP:HB2	2.31	0.60
4:J:1219:ASP:OD1	4:J:1222:ARG:NH2	2.34	0.60
6:L:316:PHE:CZ	6:L:337:VAL:HB	2.36	0.60
6:L:390:ILE:HD13	6:L:432:THR:HG23	1.83	0.60
2:M:266:SER:HA	2:M:269:CYS:SG	2.41	0.60
4:J:107:LEU:HA	4:J:276:ASN:HD21	1.64	0.60
6:L:270:VAL:O	6:L:274:ARG:N	2.31	0.60
4:J:573:THR:HG22	4:J:575:GLY:N	2.14	0.60
6:L:105:MET:HE2	6:L:384:LEU:HD12	1.81	0.60
1:N:14:GLN:O	1:N:18:THR:HG23	2.00	0.60
2:H:44:ARG:HH12	4:J:538:ARG:HH11	1.48	0.60
3:I:98:VAL:O	3:I:122:VAL:N	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:255:ILE:CG2	3:I:262:TYR:HB2	2.30	0.60
3:I:351:LEU:HA	3:I:354:ASP:OD1	2.02	0.60
4:J:265:LEU:HD11	4:J:330:MET:SD	2.40	0.60
3:I:256:GLU:CB	3:I:261:VAL:HG22	2.31	0.60
3:I:317:LEU:HB2	3:I:321:LEU:CB	2.29	0.60
4:J:986:ASP:HB2	4:J:992:LYS:HG3	1.83	0.60
6:L:13:VAL:O	6:L:17:LYS:HE3	2.02	0.60
6:L:16:GLY:HA2	6:L:22:LEU:HD11	1.83	0.60
3:I:228:VAL:N	3:I:335:THR:O	2.30	0.60
3:I:475:VAL:HG22	3:I:492:MET:O	2.01	0.60
3:I:633:LEU:HG	3:I:644:LEU:HB3	1.82	0.60
3:I:1125:GLY:HA3	3:I:1179:GLY:HA2	1.83	0.60
4:J:423:LEU:CD1	4:J:468:VAL:HG12	2.31	0.60
4:J:513:MET:SD	4:J:579:LEU:HB2	2.42	0.60
6:L:279:ARG:O	6:L:283:GLN:HG2	2.02	0.60
2:H:13:LEU:HD11	2:H:15:ASP:O	2.02	0.60
2:H:190:ALA:HB2	2:H:200:LYS:HB2	1.83	0.60
3:I:1161:LEU:HG	3:I:1164:PHE:CD2	2.34	0.60
4:J:796:LEU:HD12	4:J:1142:ALA:HB2	1.83	0.60
6:L:286:LEU:O	6:L:337:VAL:HG22	2.01	0.60
6:L:384:LEU:O	6:L:387:VAL:HG12	2.02	0.60
6:L:605:GLU:HA	6:L:608:ARG:HG2	1.82	0.60
2:G:8:PHE:HA	2:G:32:GLU:OE2	2.02	0.60
3:I:519:ASN:O	3:I:523:GLU:HG2	2.02	0.60
3:I:801:ARG:HD2	3:I:1229:TYR:OH	2.01	0.60
3:I:857:VAL:HG21	3:I:862:LEU:HD21	1.83	0.60
3:I:1043:ALA:HB1	3:I:1044:PRO:HD2	1.83	0.60
4:J:59:ALA:HB2	4:J:71:LEU:HD22	1.83	0.60
4:J:839:VAL:CG1	4:J:864:LEU:HD12	2.31	0.60
2:M:286:GLU:CG	2:M:300:LEU:HD21	2.31	0.60
3:I:870:ILE:HD13	3:I:884:VAL:HG13	1.83	0.60
4:J:959:LYS:NZ	4:J:961:SER:OG	2.34	0.60
4:J:1039:ASP:OD2	4:J:1074:LEU:HB3	2.01	0.60
6:L:12:LEU:HB3	6:L:30:HIS:ND1	2.16	0.60
2:H:24:ALA:HB3	2:H:213:PRO:HG2	1.84	0.60
3:I:862:LEU:HB3	3:I:865:LEU:HD23	1.84	0.60
3:I:1016:GLU:O	3:I:1020:GLU:HG2	2.01	0.60
4:J:809:VAL:HG12	4:J:911:LYS:HA	1.82	0.60
4:J:813:ASP:OD1	4:J:883:ARG:NH2	2.35	0.60
6:L:15:ARG:HA	6:L:18:GLU:OE1	2.01	0.60
6:L:375:ALA:HA	6:L:378:GLU:OE1	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:584:ARG:HH22	8:P:57:DT:H71	1.67	0.60
3:I:1288:GLN:O	3:I:1292:THR:HB	2.02	0.59
4:J:980:THR:HG23	4:J:997:VAL:HB	1.84	0.59
4:J:1237:VAL:CG1	4:J:1253:ILE:HD13	2.32	0.59
10:N:102:1N7:C3	10:N:102:1N7:C18	2.71	0.59
2:H:35:PHE:HA	2:H:38:THR:HG22	1.83	0.59
3:I:174:ALA:CB	3:I:432:LEU:HD22	2.31	0.59
3:I:203:LYS:O	3:I:204:LEU:HD23	2.01	0.59
3:I:469:VAL:O	3:I:472:GLU:HG3	2.02	0.59
3:I:521:LEU:HD12	3:I:667:LEU:HD12	1.83	0.59
3:I:1024:GLU:HA	3:I:1027:LYS:CE	2.31	0.59
4:J:20:ILE:CD1	4:J:1344:LEU:HD11	2.32	0.59
4:J:117:LEU:HG	4:J:118:LYS:HG2	1.84	0.59
6:L:386:LEU:O	6:L:389:SER:OG	2.11	0.59
3:I:80:PHE:CE2	3:I:88:ARG:HD2	2.37	0.59
3:I:1117:LEU:HD21	3:I:1182:ILE:HD12	1.85	0.59
4:J:641:ILE:HD12	4:J:644:MET:HE3	1.84	0.59
6:L:162:ILE:HD13	6:L:221:PHE:CE2	2.37	0.59
6:L:360:ASP:HA	6:L:363:ARG:HB3	1.85	0.59
6:L:525:ASP:OD1	6:L:527:THR:N	2.32	0.59
1:N:36:LEU:HD23	1:N:43:PRO:HA	1.83	0.59
3:I:215:TYR:HB3	3:I:220:ILE:HD11	1.83	0.59
3:I:965:GLN:O	3:I:968:GLU:HG3	2.02	0.59
3:I:1013:GLN:HG2	3:I:1017:GLN:NE2	2.17	0.59
6:L:551:LEU:HD21	6:L:598:LEU:HD21	1.83	0.59
6:L:595:LEU:HA	6:L:598:LEU:HB2	1.85	0.59
2:G:49:SER:OG	3:I:1083:GLU:OE2	2.20	0.59
3:I:28:LEU:HD21	3:I:524:ILE:HG13	1.84	0.59
3:I:266:GLY:O	3:I:267:ARG:NE	2.34	0.59
3:I:670:PHE:HZ	3:I:1117:LEU:HD13	1.68	0.59
3:I:798:GLN:HB3	3:I:827:ARG:HH22	1.68	0.59
3:I:1064:ASP:O	3:I:1076:ILE:HG22	2.03	0.59
4:J:441:LEU:O	4:J:442:ILE:HD13	2.03	0.59
7:O:40:DC:C1'	7:O:41:DT:H5'	2.32	0.59
2:G:29:GLU:HB3	2:G:30:PRO:HD3	1.83	0.59
3:I:1291:LEU:CD2	4:J:1351:VAL:HG13	2.33	0.59
4:J:388:ARG:CB	4:J:390:LEU:HD13	2.32	0.59
4:J:783:LEU:HA	4:J:786:THR:HG22	1.85	0.59
4:J:1049:GLN:NE2	4:J:1060:VAL:HB	2.18	0.59
6:L:347:ILE:HA	6:L:350:GLU:HB2	1.84	0.59
6:L:368:GLY:O	6:L:372:ALA:N	2.23	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:O:56:DC:H2''	7:O:57:DT:O5'	2.02	0.59
2:M:250:ASP:HB3	2:M:253:LEU:CD2	2.33	0.59
3:I:106:GLU:HG2	3:I:109:ALA:HB3	1.83	0.59
3:I:1117:LEU:HD12	3:I:1195:ILE:HG12	1.85	0.59
3:I:1243:MET:SD	4:J:372:MET:HG3	2.42	0.59
4:J:885:VAL:HG13	4:J:894:VAL:HG11	1.83	0.59
4:J:1178:THR:HA	4:J:1184:ASP:HB3	1.83	0.59
6:L:94:THR:HG22	6:L:96:ASP:H	1.67	0.59
6:L:412:LEU:O	6:L:416:VAL:HG23	2.02	0.59
8:P:65:DT:H1'	8:P:66:DT:H5'	1.85	0.59
3:I:966:ILE:HG23	10:I:1401:1N7:H25	1.85	0.59
3:I:1072:ASN:ND2	3:I:1111:GLN:OE1	2.36	0.59
4:J:226:ALA:HA	4:J:229:GLN:HE21	1.67	0.59
4:J:664:ILE:CG2	4:J:678:ARG:HG2	2.33	0.59
6:L:158:LEU:HD22	6:L:218:ARG:HD3	1.84	0.59
6:L:361:ILE:HA	6:L:364:ARG:NH2	2.16	0.59
3:I:1128:ILE:HG13	3:I:1144:PHE:HE2	1.68	0.59
4:J:289:ASP:HA	4:J:292:VAL:HG22	1.85	0.59
4:J:342:LEU:HG	4:J:1352:ILE:HD13	1.84	0.59
4:J:515:ARG:O	4:J:545:HIS:HB2	2.03	0.59
6:L:130:VAL:HA	6:L:365:MET:HG3	1.83	0.59
8:P:59:DA:H2''	8:P:60:DA:O5'	2.01	0.59
8:P:67:DT:H5''	2:M:298:LYS:CB	2.31	0.59
3:I:588:GLU:HG2	3:I:607:SER:N	2.17	0.59
3:I:758:ARG:NH2	3:I:762:ASN:OD1	2.28	0.59
3:I:833:ILE:HA	3:I:1055:ALA:HA	1.84	0.59
3:I:906:PHE:HD2	6:L:611:LEU:HD21	1.68	0.59
3:I:918:LEU:HD12	3:I:919:ARG:H	1.67	0.59
3:I:936:ARG:HB3	3:I:939:VAL:CG2	2.32	0.59
4:J:1176:VAL:HG12	4:J:1184:ASP:HB2	1.84	0.59
6:L:150:ARG:HB3	6:L:155:GLU:HB2	1.85	0.59
6:L:231:THR:CG2	6:L:249:ILE:HG13	2.32	0.59
6:L:466:ILE:HG23	6:L:469:GLN:HE21	1.67	0.59
3:I:1010:GLN:O	3:I:1013:GLN:HB3	2.03	0.58
4:J:194:LEU:HB3	4:J:228:VAL:HG22	1.85	0.58
4:J:621:ALA:O	4:J:624:ILE:HG22	2.03	0.58
4:J:1322:ALA:HA	4:J:1325:PHE:HE1	1.68	0.58
6:L:544:THR:HG22	6:L:607:LEU:HD21	1.85	0.58
2:H:214:GLU:O	2:H:218:ARG:NE	2.35	0.58
3:I:177:ILE:HG23	3:I:183:TRP:CD1	2.38	0.58
3:I:314:ASN:O	3:I:315:MET:HG3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:871:VAL:HG13	3:I:883:LEU:O	2.03	0.58
6:L:130:VAL:O	6:L:134:VAL:HG23	2.03	0.58
7:O:40:DC:H1'	7:O:41:DT:H5'	1.85	0.58
2:H:102:LEU:O	2:H:141:SER:HA	2.03	0.58
3:I:719:LYS:N	3:I:751:TYR:OH	2.24	0.58
4:J:85:CYS:SG	4:J:86:GLU:N	2.76	0.58
2:G:44:ARG:O	2:G:48:LEU:HG	2.03	0.58
3:I:302:ILE:CG2	3:I:309:LEU:HA	2.33	0.58
3:I:914:LYS:HG2	3:I:915:ASP:H	1.68	0.58
4:J:384:LYS:HG3	4:J:415:VAL:HG12	1.86	0.58
4:J:430:HIS:CD2	4:J:432:LEU:HB2	2.38	0.58
4:J:694:SER:O	4:J:697:MET:HG3	2.04	0.58
4:J:1281:GLU:OE2	4:J:1284:ARG:HG2	2.03	0.58
6:L:315:TRP:CZ3	6:L:316:PHE:HB2	2.38	0.58
2:H:110:VAL:N	2:H:131:CYS:O	2.36	0.58
2:H:192:VAL:HG22	2:H:193:GLU:OE1	2.04	0.58
3:I:97:ARG:HH22	6:L:475:GLY:HA2	1.68	0.58
3:I:302:ILE:HG22	3:I:309:LEU:HD12	1.84	0.58
3:I:565:GLU:OE1	3:I:565:GLU:N	2.29	0.58
3:I:753:LEU:HD23	3:I:767:GLN:HB2	1.86	0.58
3:I:1103:VAL:HG22	3:I:1104:PRO:HD3	1.86	0.58
4:J:442:ILE:HG22	4:J:443:GLU:O	2.03	0.58
4:J:527:LEU:HD23	4:J:533:ALA:HB2	1.84	0.58
4:J:1156:LEU:CD1	4:J:1209:VAL:HA	2.33	0.58
6:L:454:VAL:O	6:L:458:GLU:N	2.35	0.58
8:P:42:DT:H2''	8:P:43:DT:C7	2.34	0.58
3:I:11:ILE:HG22	3:I:1172:LEU:HD11	1.86	0.58
3:I:446:ASP:HB3	3:I:546:GLU:O	2.03	0.58
3:I:690:VAL:HG22	3:I:1236:ASN:HB3	1.85	0.58
4:J:422:LEU:O	4:J:468:VAL:HA	2.02	0.58
4:J:548:VAL:O	4:J:572:THR:N	2.28	0.58
6:L:41:ILE:O	6:L:45:ILE:HG13	2.04	0.58
6:L:151:VAL:CG2	6:L:161:LEU:HD12	2.34	0.58
6:L:157:ARG:HG2	6:L:160:ASP:N	2.18	0.58
6:L:271:ASN:O	6:L:275:VAL:HG23	2.04	0.58
6:L:385:ARG:HB2	7:O:54:DT:H1'	1.85	0.58
6:L:548:LEU:HA	6:L:551:LEU:CD1	2.34	0.58
3:I:103:VAL:HA	3:I:117:ILE:HG22	1.86	0.58
3:I:569:ILE:CD1	4:J:783:LEU:HD22	2.33	0.58
4:J:700:ASN:O	4:J:704:GLU:HB2	2.03	0.58
4:J:1322:ALA:HA	4:J:1325:PHE:CE1	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1356:LEU:HD12	4:J:1365:TYR:CG	2.39	0.58
6:L:583:THR:OG1	7:O:26:DT:OP2	2.20	0.58
7:O:16:DC:C2'	7:O:17:DA:H5'	2.34	0.58
2:G:97:GLU:OE1	2:G:99:ILE:HG13	2.04	0.58
3:I:66:SER:HA	3:I:104:ILE:HA	1.85	0.58
3:I:66:SER:CB	3:I:104:ILE:HG22	2.33	0.58
3:I:98:VAL:HB	3:I:122:VAL:CG1	2.34	0.58
4:J:808:VAL:O	4:J:810:THR:HG23	2.04	0.58
4:J:984:LEU:O	4:J:992:LYS:HB2	2.04	0.58
4:J:1109:LEU:HD12	4:J:1109:LEU:H	1.69	0.58
6:L:253:SER:HA	6:L:256:PHE:HB3	1.85	0.58
6:L:285:ARG:O	6:L:289:LYS:HB3	2.04	0.58
6:L:576:VAL:CG1	6:L:587:ILE:HG21	2.33	0.58
2:G:68:TYR:HB3	3:I:756:TYR:HD2	1.68	0.58
2:G:125:LYS:HG3	2:G:127:GLN:OE1	2.04	0.58
3:I:147:SER:HB2	3:I:530:ILE:HD13	1.86	0.58
3:I:564:PRO:O	3:I:569:ILE:HG12	2.03	0.58
4:J:915:ILE:HA	4:J:918:ILE:CG1	2.34	0.58
4:J:1266:ILE:HB	4:J:1276:GLU:O	2.04	0.58
4:J:1325:PHE:CE2	4:J:1326:GLN:HG3	2.38	0.58
6:L:151:VAL:HG21	6:L:161:LEU:HD12	1.85	0.58
6:L:231:THR:HA	6:L:248:GLU:OE1	2.03	0.58
6:L:386:LEU:HB2	7:O:54:DT:O2	2.03	0.58
3:I:255:ILE:HB	3:I:263:VAL:H	1.69	0.58
3:I:628:HIS:HB3	3:I:647:ARG:NH2	2.18	0.58
4:J:378:LYS:HB3	4:J:379:PRO:HD3	1.85	0.58
4:J:1061:VAL:CG2	4:J:1105:ALA:HB3	2.33	0.58
4:J:1175:LEU:O	4:J:1187:GLU:HG2	2.04	0.58
4:J:1369:ARG:O	4:J:1373:ARG:N	2.35	0.58
6:L:113:ARG:O	6:L:117:ILE:HD12	2.04	0.58
6:L:339:ARG:HB3	6:L:343:LYS:NZ	2.19	0.58
6:L:370:ALA:O	6:L:374:ARG:N	2.32	0.58
6:L:605:GLU:HA	6:L:608:ARG:CG	2.34	0.58
1:N:51:ILE:HG13	1:N:52:PHE:H	1.69	0.57
2:H:35:PHE:O	2:H:38:THR:HG22	2.03	0.57
3:I:5:TYR:HA	3:I:8:LYS:CD	2.33	0.57
3:I:519:ASN:ND2	3:I:796:LEU:HD23	2.18	0.57
4:J:148:GLU:HB2	4:J:177:ASP:HB2	1.86	0.57
4:J:844:THR:HG23	4:J:864:LEU:HD21	1.86	0.57
6:L:162:ILE:HG22	6:L:261:LEU:CB	2.34	0.57
6:L:440:THR:HG21	8:P:37:DG:OP1	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:N:39:ALA:HB3	1:N:61:CYS:SG	2.44	0.57
3:I:60:GLN:HA	3:I:67:GLU:HA	1.87	0.57
3:I:718:ALA:HB3	3:I:779:ARG:O	2.04	0.57
3:I:865:LEU:HD12	3:I:869:GLY:C	2.24	0.57
3:I:1010:GLN:O	3:I:1014:LEU:HG	2.04	0.57
3:I:1192:GLU:O	3:I:1196:LYS:HG2	2.04	0.57
4:J:923:ILE:HD11	4:J:1253:ILE:HA	1.86	0.57
8:P:61:DT:H1'	8:P:62:DG:C5'	2.34	0.57
2:G:26:VAL:CG2	2:G:203:ILE:HB	2.33	0.57
3:I:197:ARG:NH2	6:L:29:ASP:OD2	2.37	0.57
3:I:823:VAL:HG23	3:I:1060:ILE:HG22	1.85	0.57
3:I:866:ASP:HB3	3:I:872:TYR:CE1	2.39	0.57
4:J:1045:THR:CG2	4:J:1074:LEU:HD12	2.35	0.57
4:J:1266:ILE:HD13	4:J:1278:GLU:HB3	1.86	0.57
6:L:130:VAL:HG22	6:L:365:MET:CG	2.34	0.57
6:L:274:ARG:HA	6:L:274:ARG:NH1	2.19	0.57
6:L:573:LEU:HA	6:L:576:VAL:HG12	1.85	0.57
6:L:585:GLU:O	6:L:588:ARG:HG2	2.03	0.57
3:I:15:PHE:CG	3:I:1190:ALA:HB2	2.40	0.57
3:I:70:TYR:HA	3:I:100:LEU:CD2	2.34	0.57
3:I:141:THR:HB	3:I:514:PHE:HE1	1.68	0.57
4:J:694:SER:OG	4:J:738:ARG:NE	2.18	0.57
4:J:826:ILE:HD11	4:J:831:VAL:HG13	1.85	0.57
2:G:48:LEU:HD21	2:G:183:ILE:HG12	1.85	0.57
2:H:134:THR:HG23	2:H:136:GLU:H	1.67	0.57
3:I:274:ILE:HA	3:I:277:LEU:HD12	1.85	0.57
3:I:636:CYS:HB2	3:I:645:PHE:CD2	2.39	0.57
3:I:1245:ALA:HB2	4:J:351:GLY:HA3	1.87	0.57
3:I:1307:ASN:HB3	3:I:1312:ASN:O	2.04	0.57
5:K:44:ASP:OD1	5:K:52:ARG:NH1	2.37	0.57
2:H:41:ASN:ND2	3:I:1217:THR:O	2.38	0.57
3:I:230:PHE:CD2	3:I:292:ILE:HD12	2.40	0.57
3:I:1144:PHE:O	3:I:1147:ARG:HG2	2.04	0.57
4:J:1120:THR:HB	4:J:1123:ARG:HH11	1.70	0.57
6:L:51:MET:N	6:L:52:GLY:HA2	2.19	0.57
2:G:192:VAL:HG22	2:G:193:GLU:H	1.70	0.57
2:H:183:ILE:HD11	2:H:203:ILE:CG2	2.34	0.57
3:I:270:THR:O	3:I:273:HIS:HB2	2.03	0.57
3:I:397:LEU:N	3:I:418:GLY:O	2.24	0.57
3:I:823:VAL:CG2	3:I:1060:ILE:HG22	2.35	0.57
4:J:426:ALA:HB3	4:J:427:PRO:HD3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:454:CYS:O	4:J:458:ASN:N	2.38	0.57
4:J:475:GLU:HG3	5:K:24:ALA:CB	2.35	0.57
4:J:1087:ASP:O	4:J:1096:PRO:HB3	2.05	0.57
4:J:1329:THR:O	4:J:1333:THR:HG23	2.05	0.57
3:I:10:ARG:NH2	3:I:791:LEU:HB2	2.20	0.57
3:I:1165:SER:HA	3:I:1168:GLU:OE1	2.05	0.57
4:J:306:LEU:CD2	4:J:307:LEU:HD23	2.35	0.57
4:J:1037:PHE:HE2	4:J:1059:LEU:HB2	1.69	0.57
6:L:343:LYS:O	6:L:347:ILE:HG13	2.05	0.57
3:I:249:GLU:O	3:I:268:ARG:HA	2.05	0.57
3:I:1146:GLN:OE1	3:I:1160:ASP:HA	2.04	0.57
6:L:124:GLU:O	6:L:127:ILE:HG12	2.05	0.57
6:L:374:ARG:HH12	6:L:378:GLU:HG3	1.70	0.57
3:I:174:ALA:HB3	3:I:432:LEU:HD22	1.85	0.57
4:J:821:MET:HE1	4:J:879:ALA:CA	2.35	0.57
4:J:848:VAL:HB	4:J:858:VAL:HG22	1.86	0.57
5:K:29:GLN:HE22	5:K:64:LEU:HD22	1.70	0.57
6:L:112:THR:HG23	6:L:115:GLY:CA	2.32	0.57
6:L:118:ASP:O	6:L:121:LYS:HG2	2.05	0.57
6:L:289:LYS:HA	6:L:293:GLU:OE1	2.05	0.57
6:L:392:LYS:CE	7:O:56:DC:H4'	2.35	0.57
6:L:541:ARG:O	6:L:545:HIS:HB2	2.05	0.57
6:L:557:LYS:HB3	6:L:580:PHE:HZ	1.69	0.57
6:L:565:ILE:O	6:L:567:MET:HG2	2.04	0.57
8:P:36:DT:H2'	8:P:37:DG:H5''	1.86	0.57
8:P:43:DT:C1'	8:P:44:DT:H5'	2.34	0.57
3:I:15:PHE:CD2	3:I:1190:ALA:HB2	2.40	0.56
3:I:404:LYS:NZ	3:I:449:GLY:O	2.32	0.56
4:J:353:SER:OG	4:J:354:VAL:N	2.38	0.56
4:J:384:LYS:HG3	4:J:415:VAL:CG1	2.35	0.56
4:J:623:GLN:O	4:J:627:THR:HG22	2.05	0.56
4:J:811:GLU:OE2	4:J:890:THR:HG23	2.05	0.56
4:J:909:ILE:HD11	4:J:913:GLU:CB	2.35	0.56
2:M:283:GLN:HG2	2:M:317:ARG:NH2	2.20	0.56
2:H:13:LEU:HD12	2:H:29:GLU:OE2	2.04	0.56
3:I:185:ASP:HB2	3:I:197:ARG:CG	2.35	0.56
3:I:596:ASP:OD1	3:I:596:ASP:N	2.36	0.56
4:J:46:TYR:OH	6:L:453:PRO:HG3	2.05	0.56
4:J:514:THR:OG1	4:J:595:ALA:O	2.23	0.56
4:J:610:ARG:HD2	4:J:866:GLU:HG2	1.88	0.56
4:J:658:GLU:HA	4:J:661:VAL:HG22	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1060:VAL:HG22	4:J:1107:VAL:N	2.13	0.56
4:J:1064:SER:HB3	4:J:1072:LYS:CD	2.35	0.56
6:L:148:TYR:HA	6:L:161:LEU:CD1	2.35	0.56
2:G:226:GLU:O	2:H:10:LYS:HE2	2.05	0.56
3:I:166:SER:O	3:I:166:SER:OG	2.23	0.56
3:I:708:VAL:HG11	3:I:794:LEU:HD22	1.87	0.56
4:J:37:GLU:HB2	4:J:104:HIS:CE1	2.40	0.56
4:J:153:ASN:HB3	4:J:154:LEU:CD1	2.34	0.56
4:J:311:ARG:HH21	4:J:1329:THR:HG21	1.70	0.56
4:J:367:GLY:N	4:J:448:GLN:HB2	2.21	0.56
4:J:900:GLY:O	4:J:908:ILE:HD12	2.05	0.56
4:J:1261:LEU:HD13	4:J:1304:ARG:HH11	1.71	0.56
5:K:15:ASN:ND2	5:K:17:PHE:HB2	2.20	0.56
6:L:144:LEU:HD21	6:L:221:PHE:CD1	2.40	0.56
6:L:280:VAL:HG21	6:L:355:ILE:CG2	2.35	0.56
6:L:439:ILE:HG22	6:L:443:ILE:CD1	2.36	0.56
6:L:548:LEU:HA	6:L:551:LEU:CG	2.35	0.56
2:H:101:THR:O	2:H:102:LEU:HD23	2.04	0.56
2:H:192:VAL:HG12	2:H:195:ARG:HB2	1.87	0.56
3:I:3:TYR:CE1	3:I:11:ILE:HD11	2.40	0.56
3:I:205:PRO:HG2	3:I:355:PRO:HD3	1.88	0.56
3:I:514:PHE:CE2	3:I:760:ASN:HB3	2.41	0.56
3:I:944:ARG:HA	3:I:947:GLU:OE1	2.04	0.56
3:I:1106:ARG:HD2	3:I:1106:ARG:H	1.70	0.56
4:J:60:ARG:HG2	4:J:89:GLY:O	2.05	0.56
4:J:195:GLU:HA	4:J:198:CYS:SG	2.44	0.56
4:J:201:LEU:HA	4:J:204:GLU:HB2	1.87	0.56
4:J:235:GLU:OE1	4:J:235:GLU:N	2.36	0.56
4:J:297:ARG:HE	6:L:100:MET:HE1	1.70	0.56
4:J:1311:LYS:CD	4:J:1314:LEU:HD21	2.35	0.56
6:L:593:LYS:HA	6:L:596:ARG:HD3	1.87	0.56
2:G:31:LEU:HB3	2:G:199:ASP:OD2	2.05	0.56
3:I:683:ALA:O	3:I:686:GLN:HB2	2.05	0.56
3:I:1333:LEU:HB2	3:I:1335:ILE:HG12	1.86	0.56
4:J:70:CYS:SG	4:J:73:GLY:N	2.78	0.56
4:J:128:LEU:HD11	4:J:189:LEU:HD21	1.88	0.56
4:J:171:GLU:HG2	4:J:172:PHE:CD2	2.41	0.56
4:J:382:TYR:HE1	4:J:401:VAL:HG21	1.70	0.56
4:J:502:PRO:HB2	4:J:507:VAL:CG1	2.36	0.56
4:J:643:ASP:HB3	4:J:720:ASN:OD1	2.06	0.56
6:L:363:ARG:HG2	6:L:367:ILE:HD12	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:390:ILE:HD12	6:L:435:ILE:HG21	1.87	0.56
7:O:33:DA:H2'	7:O:33:DA:OP2	2.04	0.56
10:N:102:1N7:C3	10:N:102:1N7:C2	2.73	0.56
2:G:165:GLU:HG3	2:G:170:ARG:NH2	2.21	0.56
4:J:1267:VAL:HG21	4:J:1301:THR:HG22	1.86	0.56
7:O:37:DA:H2''	7:O:38:DG:H8	1.70	0.56
3:I:26:TYR:HE2	3:I:28:LEU:HB2	1.71	0.56
3:I:105:TYR:CE1	3:I:114:VAL:HG12	2.41	0.56
3:I:363:LEU:HD22	3:I:382:GLU:OE1	2.05	0.56
3:I:469:VAL:HA	3:I:472:GLU:CG	2.36	0.56
4:J:573:THR:HB	4:J:576:ARG:HG3	1.87	0.56
4:J:689:ALA:O	4:J:693:VAL:HG23	2.06	0.56
4:J:894:VAL:HG21	4:J:915:ILE:HD11	1.87	0.56
4:J:1298:VAL:HG22	4:J:1299:GLY:O	2.06	0.56
6:L:124:GLU:O	6:L:128:ASN:ND2	2.39	0.56
2:H:64:VAL:HA	2:H:65:LEU:HB2	1.88	0.56
2:H:82:LEU:HG	2:H:173:VAL:CG1	2.35	0.56
3:I:131:THR:HG22	3:I:132:ASP:H	1.70	0.56
3:I:350:THR:O	3:I:354:ASP:N	2.39	0.56
3:I:724:VAL:HG12	3:I:775:GLU:O	2.04	0.56
3:I:877:VAL:HG11	3:I:920:VAL:HG21	1.87	0.56
4:J:1162:ILE:HD12	4:J:1202:GLU:C	2.25	0.56
6:L:476:ARG:HD2	6:L:477:GLU:N	2.21	0.56
2:M:307:LEU:HA	2:M:312:LEU:HB2	1.88	0.56
2:G:164:ASP:OD2	2:G:166:ARG:HG3	2.06	0.56
3:I:339:ASN:ND2	3:I:341:LEU:HB3	2.21	0.56
3:I:728:ASP:OD1	3:I:729:ALA:N	2.38	0.56
4:J:889:ASP:O	4:J:1286:LYS:NZ	2.27	0.56
2:M:253:LEU:HA	2:M:278:ILE:HB	1.87	0.56
3:I:839:VAL:CA	3:I:1049:ILE:HG22	2.28	0.56
4:J:84:ILE:HG22	4:J:91:GLU:HG3	1.88	0.56
4:J:306:LEU:HD23	4:J:307:LEU:HD23	1.86	0.56
4:J:355:ILE:HG12	4:J:464:ASP:O	2.05	0.56
6:L:162:ILE:HG22	6:L:261:LEU:HB3	1.88	0.56
2:G:45:ARG:HG3	3:I:1083:GLU:HG3	1.88	0.55
3:I:211:ARG:HH22	3:I:217:THR:HG22	1.70	0.55
3:I:942:ASP:OD2	3:I:943:LYS:N	2.39	0.55
4:J:37:GLU:HB2	4:J:104:HIS:NE2	2.21	0.55
4:J:511:TYR:CD2	4:J:728:SER:HB3	2.40	0.55
4:J:548:VAL:HG12	4:J:550:VAL:HG23	1.86	0.55
4:J:759:ILE:HD11	4:J:774:ILE:CG2	2.35	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1307:LEU:HD23	4:J:1311:LYS:HG3	1.88	0.55
5:K:3:ARG:NH1	5:K:55:GLU:OE1	2.39	0.55
6:L:143:TYR:HA	6:L:146:GLU:HG3	1.88	0.55
3:I:105:TYR:CD1	3:I:114:VAL:HA	2.41	0.55
3:I:860:ALA:O	3:I:863:SER:HB3	2.06	0.55
3:I:1234:LYS:NZ	3:I:1238:LEU:HD21	2.21	0.55
3:I:1281:TYR:OH	4:J:431:ARG:O	2.18	0.55
4:J:343:LEU:HD22	4:J:1351:VAL:HG12	1.88	0.55
4:J:363:LEU:CD2	4:J:487:THR:HG22	2.36	0.55
4:J:502:PRO:HG2	4:J:601:ILE:CD1	2.37	0.55
4:J:1164:SER:O	4:J:1175:LEU:HG	2.06	0.55
2:H:4:SER:OG	2:H:5:VAL:N	2.40	0.55
3:I:146:VAL:HG12	3:I:529:ARG:HB3	1.88	0.55
3:I:1064:ASP:OD1	3:I:1239:VAL:HG12	2.07	0.55
4:J:59:ALA:HB2	4:J:71:LEU:CD2	2.36	0.55
4:J:701:LEU:CD2	4:J:723:TYR:HB2	2.35	0.55
4:J:910:ASN:CG	5:K:15:ASN:HA	2.27	0.55
4:J:998:PRO:HG2	4:J:1020:TRP:NE1	2.21	0.55
4:J:1048:ARG:CZ	4:J:1059:LEU:HG	2.37	0.55
6:L:235:ILE:HD13	6:L:245:ALA:CB	2.36	0.55
8:P:36:DT:C2'	8:P:37:DG:H3'	2.37	0.55
2:G:192:VAL:HG11	2:G:195:ARG:O	2.07	0.55
2:H:211:ILE:CG1	2:H:215:GLU:HB3	2.37	0.55
3:I:204:LEU:HD21	3:I:369:MET:SD	2.46	0.55
3:I:321:LEU:HA	3:I:324:LYS:CG	2.29	0.55
3:I:349:GLU:O	3:I:353:VAL:HG23	2.06	0.55
4:J:259:ARG:HG2	10:L:701:1N7:O2	2.07	0.55
4:J:572:THR:HG21	4:J:589:TYR:OH	2.06	0.55
4:J:583:VAL:HG13	4:J:584:PRO:HD2	1.87	0.55
4:J:857:LEU:HD21	4:J:871:LEU:HD22	1.88	0.55
6:L:128:ASN:HA	6:L:131:GLN:OE1	2.05	0.55
6:L:351:THR:CB	6:L:358:VAL:HG21	2.36	0.55
2:H:130:ILE:HG22	2:H:131:CYS:SG	2.46	0.55
2:H:155:ALA:HA	2:H:158:ARG:NH2	2.22	0.55
3:I:10:ARG:HD2	3:I:1181:PRO:CG	2.37	0.55
3:I:22:LEU:HD22	3:I:603:ILE:CD1	2.37	0.55
3:I:161:LYS:HD2	3:I:170:VAL:CG2	2.35	0.55
3:I:731:ARG:NH1	3:I:752:ASN:OD1	2.39	0.55
3:I:842:ASP:HA	3:I:847:PRO:HA	1.89	0.55
4:J:85:CYS:O	4:J:89:GLY:HA2	2.05	0.55
4:J:120:LEU:HD12	4:J:1330:ARG:HD3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:128:LEU:HD11	4:J:189:LEU:CD2	2.36	0.55
4:J:527:LEU:HB2	4:J:550:VAL:HG22	1.88	0.55
6:L:484:ALA:O	6:L:488:LEU:HA	2.07	0.55
3:I:1013:GLN:HG2	3:I:1017:GLN:HE22	1.71	0.55
4:J:518:VAL:HB	4:J:707:ILE:HD12	1.88	0.55
4:J:1035:VAL:N	4:J:1113:VAL:O	2.20	0.55
10:J:1504:1N7:H31	10:J:1504:1N7:H5	1.88	0.55
5:K:38:LEU:HD13	5:K:58:LEU:HG	1.89	0.55
6:L:322:MET:HB3	6:L:324:LYS:CG	2.36	0.55
6:L:347:ILE:HG22	6:L:355:ILE:CD1	2.37	0.55
2:G:11:PRO:HD3	2:H:227:GLN:OE1	2.07	0.55
2:H:61:ILE:HG22	2:H:62:ASP:H	1.71	0.55
3:I:771:VAL:HG11	3:I:783:LEU:CD1	2.36	0.55
3:I:1117:LEU:CD2	3:I:1182:ILE:HD12	2.37	0.55
4:J:474:LEU:HD21	5:K:27:ALA:HB1	1.87	0.55
4:J:825:VAL:O	4:J:832:LYS:HB2	2.07	0.55
4:J:949:SER:HB3	4:J:1016:THR:HG23	1.88	0.55
6:L:13:VAL:HG11	6:L:84:LEU:CD2	2.36	0.55
6:L:487:MET:HB3	6:L:489:MET:HE1	1.88	0.55
8:P:58:DC:H5'	8:P:58:DC:C6	2.41	0.55
3:I:142:GLU:HB3	3:I:515:MET:CE	2.36	0.55
3:I:1252:SER:OG	3:I:1255:THR:O	2.24	0.55
4:J:847:ASP:HA	4:J:858:VAL:O	2.06	0.55
4:J:1160:SER:CA	4:J:1205:GLU:HA	2.37	0.55
6:L:405:ILE:O	6:L:409:ASN:ND2	2.39	0.55
3:I:1002:LEU:HD22	3:I:1007:LYS:HB2	1.89	0.55
3:I:1132:LEU:HD22	3:I:1173:ALA:HB1	1.88	0.55
4:J:515:ARG:HH12	4:J:717:VAL:HG23	1.72	0.55
4:J:1347:LEU:HG	4:J:1357:ILE:CG2	2.36	0.55
6:L:338:HIS:O	6:L:342:GLN:HG3	2.07	0.55
6:L:487:MET:HB3	6:L:489:MET:HE2	1.89	0.55
1:N:24:ARG:HG3	4:J:684:ASP:OD1	2.07	0.55
2:H:54:CYS:SG	2:H:92:VAL:HB	2.46	0.55
2:H:73:GLY:O	2:H:134:THR:N	2.39	0.55
3:I:960:LEU:HA	3:I:963:GLU:CG	2.37	0.55
3:I:1270:PHE:O	4:J:344:GLY:HA2	2.07	0.55
4:J:129:ASP:OD1	4:J:220:ARG:NH1	2.33	0.55
4:J:308:ASP:OD2	4:J:311:ARG:NH1	2.39	0.55
4:J:349:TYR:CD2	4:J:472:LEU:HD11	2.42	0.55
4:J:653:ILE:HG23	4:J:692:ARG:NH1	2.22	0.55
4:J:1115:ILE:HB	4:J:1119:ASP:OD2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1172:LYS:CD	4:J:1189:MET:HB3	2.32	0.55
6:L:252:LEU:HA	6:L:255:VAL:HG22	1.89	0.55
6:L:373:ARG:HB3	6:L:377:LYS:NZ	2.22	0.55
6:L:471:LEU:HB2	6:L:478:PRO:HD3	1.88	0.55
8:P:60:DA:C2'	8:P:61:DT:H71	2.36	0.55
2:H:19:VAL:HG12	2:H:20:SER:H	1.72	0.54
3:I:122:VAL:HG22	3:I:123:TYR:O	2.06	0.54
3:I:217:THR:HB	3:I:313:ALA:HB3	1.89	0.54
3:I:349:GLU:N	3:I:349:GLU:OE1	2.40	0.54
3:I:387:ASN:CA	3:I:391:SER:HB3	2.37	0.54
3:I:563:THR:HG23	3:I:564:PRO:HD2	1.88	0.54
3:I:1103:VAL:HG21	4:J:639:VAL:HG11	1.88	0.54
4:J:80:HIS:O	4:J:83:VAL:HG12	2.06	0.54
4:J:385:LEU:HD13	4:J:400:MET:SD	2.47	0.54
4:J:540:GLY:O	4:J:541:LEU:HD23	2.07	0.54
4:J:1082:ASP:OD2	4:J:1086:ASN:ND2	2.39	0.54
6:L:406:GLN:HA	6:L:409:ASN:ND2	2.21	0.54
2:M:257:VAL:HA	2:M:260:LEU:HD23	1.90	0.54
3:I:57:PHE:CD2	3:I:70:TYR:HB2	2.42	0.54
3:I:765:ILE:HD12	3:I:787:PRO:HG3	1.89	0.54
4:J:107:LEU:HA	4:J:276:ASN:ND2	2.23	0.54
4:J:1021:ASP:HB3	4:J:1024:THR:OG1	2.07	0.54
4:J:1035:VAL:HG12	4:J:1037:PHE:HE1	1.72	0.54
4:J:1173:ARG:HH21	4:J:1196:LEU:HD23	1.72	0.54
6:L:9:LEU:HA	6:L:12:LEU:CD2	2.37	0.54
6:L:464:ASN:O	6:L:468:ARG:HG3	2.07	0.54
3:I:56:VAL:CG2	3:I:468:LEU:HD12	2.37	0.54
4:J:1060:VAL:HA	4:J:1107:VAL:HG23	1.89	0.54
4:J:1172:LYS:HB3	4:J:1190:ILE:C	2.28	0.54
6:L:96:ASP:O	6:L:100:MET:HG3	2.08	0.54
6:L:319:ALA:HB1	6:L:322:MET:CE	2.37	0.54
6:L:567:MET:O	6:L:569:THR:HG22	2.07	0.54
2:G:45:ARG:HD2	2:H:38:THR:CB	2.29	0.54
3:I:118:LYS:NZ	3:I:488:MET:HG3	2.22	0.54
3:I:549:ASP:OD2	4:J:750:PRO:HG2	2.07	0.54
3:I:557:ARG:HB3	3:I:587:LEU:CD1	2.36	0.54
3:I:671:LEU:HD23	3:I:1186:VAL:HG22	1.90	0.54
3:I:943:LYS:HE3	3:I:947:GLU:OE2	2.08	0.54
3:I:1067:ALA:CB	3:I:1073:LYS:HA	2.38	0.54
4:J:26:SER:HB2	4:J:236:TRP:CZ2	2.41	0.54
4:J:796:LEU:HG	4:J:800:LEU:HD23	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:843:VAL:O	4:J:883:ARG:HG2	2.07	0.54
6:L:9:LEU:O	6:L:12:LEU:HG	2.07	0.54
6:L:136:GLU:HB3	6:L:361:ILE:CG1	2.35	0.54
3:I:1073:LYS:CD	4:J:462:ASP:HB2	2.38	0.54
3:I:1121:ALA:HB2	3:I:1182:ILE:CD1	2.38	0.54
4:J:114:ILE:HG23	4:J:115:TRP:HD1	1.72	0.54
4:J:975:ILE:HG13	4:J:997:VAL:HG12	1.88	0.54
4:J:1035:VAL:HG21	4:J:1109:LEU:HB3	1.88	0.54
4:J:1095:MET:HG2	4:J:1096:PRO:O	2.08	0.54
4:J:1179:PRO:HD3	4:J:1184:ASP:CB	2.31	0.54
4:J:1265:THR:HG22	4:J:1279:GLN:HB3	1.89	0.54
8:P:64:DA:C2'	8:P:65:DT:H5''	2.36	0.54
2:G:43:LEU:HD13	2:G:217:ILE:CD1	2.34	0.54
2:H:81:ILE:O	2:H:85:LEU:HG	2.07	0.54
2:H:102:LEU:HD21	2:H:115:ILE:HG12	1.88	0.54
2:H:181:GLU:N	2:H:206:GLU:O	2.29	0.54
3:I:490:GLN:NE2	6:L:472:GLN:HB3	2.19	0.54
3:I:953:LEU:CD2	3:I:1033:ARG:HG3	2.35	0.54
3:I:1291:LEU:HD22	4:J:1351:VAL:HG13	1.89	0.54
4:J:166:LEU:O	4:J:170:GLU:N	2.40	0.54
4:J:502:PRO:HB2	4:J:507:VAL:HG12	1.89	0.54
4:J:1024:THR:HB	4:J:1123:ARG:CB	2.38	0.54
4:J:1060:VAL:HG13	4:J:1105:ALA:O	2.07	0.54
4:J:1162:ILE:HA	4:J:1203:ARG:HA	1.89	0.54
4:J:317:THR:OG1	4:J:322:ARG:O	2.13	0.54
4:J:418:GLU:CG	5:K:48:VAL:HG21	2.37	0.54
4:J:1156:LEU:HD12	4:J:1208:ASP:O	2.08	0.54
4:J:1268:ASN:HA	4:J:1276:GLU:CG	2.37	0.54
4:J:1332:LEU:O	4:J:1336:ALA:N	2.41	0.54
6:L:51:MET:CB	6:L:53:ILE:HG13	2.38	0.54
6:L:142:THR:O	6:L:146:GLU:HG3	2.07	0.54
6:L:474:MET:HG2	6:L:482:GLU:OE2	2.08	0.54
1:N:51:ILE:O	1:N:53:PRO:HD3	2.08	0.54
3:I:178:PRO:HG3	3:I:395:TYR:CE1	2.43	0.54
3:I:195:PHE:HB3	3:I:203:LYS:CG	2.38	0.54
3:I:706:ARG:NH1	3:I:793:GLU:HG3	2.23	0.54
3:I:840:SER:OG	3:I:850:ILE:HD11	2.08	0.54
3:I:1067:ALA:HB2	3:I:1073:LYS:HA	1.89	0.54
3:I:1332:SER:O	4:J:243:PRO:HG2	2.06	0.54
4:J:360:TYR:CZ	4:J:361:LEU:HD23	2.43	0.54
4:J:418:GLU:HB2	5:K:45:LYS:CG	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:983:LYS:HA	4:J:994:SER:HA	1.90	0.54
4:J:1110:GLU:O	4:J:1113:VAL:HG23	2.07	0.54
6:L:126:GLY:HA3	6:L:372:ALA:CB	2.32	0.54
2:G:16:ILE:HG23	2:G:25:LYS:O	2.08	0.54
3:I:839:VAL:HG21	3:I:841:ARG:NH1	2.23	0.54
3:I:1272:GLU:OE2	3:I:1276:TRP:NE1	2.40	0.54
4:J:122:SER:O	4:J:125:GLY:N	2.40	0.54
4:J:587:LEU:HD21	4:J:608:CYS:HA	1.89	0.54
4:J:1167:LYS:HE3	4:J:1170:LYS:HB2	1.89	0.54
6:L:275:VAL:HG12	6:L:279:ARG:HD2	1.90	0.54
6:L:582:VAL:O	6:L:583:THR:OG1	2.25	0.54
2:G:228:LEU:O	2:G:232:VAL:HG12	2.07	0.54
2:H:92:VAL:O	2:H:148:ARG:NH2	2.39	0.54
3:I:10:ARG:HD2	3:I:1181:PRO:HG2	1.90	0.54
3:I:231:GLU:HA	3:I:332:ARG:HA	1.90	0.54
3:I:590:PRO:HB2	3:I:655:VAL:CG2	2.37	0.54
3:I:936:ARG:HB3	3:I:939:VAL:HG21	1.88	0.54
3:I:1101:LEU:HD23	4:J:725:MET:SD	2.48	0.54
4:J:216:LYS:O	4:J:219:LYS:HG2	2.08	0.54
4:J:705:THR:OG1	4:J:718:SER:HA	2.07	0.54
4:J:901:ARG:O	4:J:903:LEU:N	2.39	0.54
4:J:1035:VAL:CG2	4:J:1113:VAL:HB	2.38	0.54
4:J:1163:VAL:CG2	4:J:1177:ILE:HG13	2.37	0.54
3:I:1101:LEU:O	3:I:1104:PRO:HD2	2.08	0.53
3:I:1295:SER:OG	4:J:345:LYS:HD3	2.08	0.53
4:J:515:ARG:NH1	4:J:717:VAL:HG23	2.23	0.53
10:J:1504:1N7:C3	10:J:1504:1N7:C18	2.70	0.53
2:H:77:ASP:OD1	2:H:78:ILE:N	2.34	0.53
3:I:617:ALA:HB3	3:I:653:MET:HA	1.90	0.53
3:I:622:ASN:HB2	3:I:630:VAL:CG2	2.37	0.53
3:I:1331:ARG:HG3	4:J:33:TRP:CH2	2.43	0.53
3:I:1340:GLU:HB2	4:J:19:ALA:O	2.09	0.53
4:J:279:LEU:CD1	4:J:296:LYS:HG2	2.35	0.53
4:J:846:GLU:HG3	4:J:847:ASP:O	2.08	0.53
5:K:26:ARG:HG2	5:K:59:ILE:HD13	1.90	0.53
6:L:310:GLU:OE2	6:L:356:GLU:HB2	2.08	0.53
7:O:21:DA:N3	2:M:265:ARG:NH1	2.42	0.53
7:O:26:DT:C2'	7:O:27:DT:H5'	2.35	0.53
2:G:74:VAL:HG21	2:G:81:ILE:HD11	1.90	0.53
2:G:118:ASP:HB3	2:G:121:VAL:CG1	2.38	0.53
3:I:59:ILE:CD1	3:I:472:GLU:HB2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:843:THR:OG1	3:I:844:LYS:N	2.42	0.53
3:I:1116:HIS:HE1	4:J:641:ILE:H	1.57	0.53
3:I:1127:LYS:O	3:I:1131:MET:HG3	2.08	0.53
4:J:553:THR:CB	4:J:567:THR:HG22	2.38	0.53
4:J:1172:LYS:HB3	4:J:1190:ILE:O	2.09	0.53
6:L:346:GLN:O	6:L:350:GLU:N	2.30	0.53
6:L:371:LYS:HA	6:L:374:ARG:HB2	1.91	0.53
6:L:595:LEU:HD23	6:L:595:LEU:H	1.72	0.53
2:G:231:PHE:CE1	2:H:28:LEU:HD22	2.44	0.53
2:H:65:LEU:HD23	2:H:66:HIS:N	2.23	0.53
3:I:56:VAL:HG21	3:I:468:LEU:HD12	1.91	0.53
3:I:225:PHE:CE2	3:I:347:ILE:HB	2.43	0.53
3:I:1120:ALA:O	3:I:1124:ILE:HG12	2.08	0.53
4:J:317:THR:OG1	4:J:318:GLY:N	2.42	0.53
6:L:96:ASP:HB2	6:L:99:ARG:HG3	1.89	0.53
6:L:277:MET:CE	6:L:359:LYS:HG2	2.38	0.53
6:L:351:THR:CG2	6:L:358:VAL:HG21	2.38	0.53
6:L:503:GLU:HB2	6:L:504:PRO:HD2	1.89	0.53
3:I:298:ALA:HB3	3:I:334:GLU:HB3	1.91	0.53
3:I:558:VAL:CG1	3:I:573:ASN:HB3	2.37	0.53
3:I:809:GLY:O	4:J:359:PRO:HG3	2.09	0.53
4:J:189:LEU:HB3	4:J:234:PRO:HB2	1.90	0.53
4:J:799:ARG:NH1	4:J:1142:ALA:HB1	2.23	0.53
6:L:394:TYR:O	6:L:397:ARG:HG2	2.09	0.53
10:L:701:1N7:C3	10:L:701:1N7:C2	2.74	0.53
8:P:50:DT:H2 ⁷	8:P:51:DC:C5	2.42	0.53
1:N:52:PHE:HB2	1:N:55:VAL:HG23	1.88	0.53
2:G:76:GLU:OE1	2:G:76:GLU:N	2.42	0.53
3:I:11:ILE:CG2	3:I:1172:LEU:HD11	2.39	0.53
3:I:469:VAL:HA	3:I:472:GLU:HG3	1.91	0.53
3:I:688:GLN:HB2	3:I:1235:LEU:HD22	1.91	0.53
3:I:871:VAL:CG1	3:I:883:LEU:HA	2.38	0.53
3:I:975:ILE:HD11	3:I:998:LEU:HD11	1.90	0.53
3:I:979:LEU:O	3:I:984:VAL:HA	2.09	0.53
4:J:154:LEU:HD11	4:J:158:GLN:NE2	2.24	0.53
4:J:306:LEU:O	4:J:326:SER:HB2	2.08	0.53
4:J:451:PRO:HA	4:J:454:CYS:SG	2.49	0.53
8:P:58:DC:H5 ⁷	8:P:58:DC:H6	1.73	0.53
3:I:216:THR:OG1	3:I:219:GLN:OE1	2.14	0.53
3:I:301:TYR:HB2	3:I:311:CYS:SG	2.48	0.53
3:I:657:THR:OG1	3:I:1187:PHE:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:848:GLU:OE1	3:I:886:LYS:HD2	2.09	0.53
4:J:959:LYS:HA	4:J:1007:ASP:OD1	2.08	0.53
3:I:22:LEU:HD12	3:I:23:ASP:H	1.74	0.53
3:I:801:ARG:NH2	3:I:1088:ASP:OD2	2.40	0.53
3:I:1284:ALA:N	4:J:479:GLU:OE2	2.34	0.53
4:J:233:LYS:O	4:J:236:TRP:HB2	2.08	0.53
4:J:490:ILE:HG22	4:J:500:ILE:HG21	1.89	0.53
4:J:570:LYS:NZ	4:J:589:TYR:HB3	2.24	0.53
4:J:742:GLY:O	4:J:762:ASN:HB3	2.09	0.53
4:J:1136:GLY:HA2	4:J:1240:VAL:HG13	1.91	0.53
5:K:26:ARG:HD3	5:K:64:LEU:HD21	1.89	0.53
6:L:112:THR:CG2	6:L:115:GLY:HA3	2.36	0.53
6:L:248:GLU:O	6:L:251:LYS:HG2	2.09	0.53
1:N:51:ILE:HG21	4:J:667:GLN:OE1	2.08	0.53
3:I:1082:ILE:H	3:I:1082:ILE:HD12	1.74	0.53
3:I:1287:LEU:HD21	3:I:1291:LEU:HD21	1.91	0.53
4:J:45:ASN:OD1	4:J:48:THR:HG22	2.09	0.53
4:J:1023:HIS:HA	4:J:1125:PRO:HB3	1.91	0.53
4:J:1027:VAL:HG12	4:J:1122:ALA:O	2.09	0.53
5:K:30:MET:HE1	5:K:49:ILE:HG22	1.90	0.53
6:L:99:ARG:O	6:L:103:ARG:HG3	2.09	0.53
6:L:436:ARG:HD2	8:P:35:DA:N1	2.24	0.53
3:I:255:ILE:N	3:I:263:VAL:O	2.41	0.53
3:I:367:TYR:CD2	3:I:381:ALA:HA	2.44	0.53
3:I:623:LEU:CA	3:I:630:VAL:HG13	2.38	0.53
3:I:676:ALA:HB3	4:J:779:ALA:CB	2.38	0.53
3:I:803:ALA:CB	3:I:1094:VAL:HG21	2.39	0.53
3:I:1246:ARG:NH1	3:I:1265:PHE:O	2.42	0.53
3:I:1319:MET:HE3	4:J:1353:VAL:O	2.09	0.53
4:J:117:LEU:O	4:J:132:LEU:HD11	2.09	0.53
4:J:308:ASP:OD1	4:J:328:ALA:HB3	2.09	0.53
4:J:361:LEU:HB2	4:J:365:GLN:HE21	1.73	0.53
4:J:796:LEU:O	4:J:800:LEU:HD23	2.09	0.53
6:L:366:SER:HA	6:L:369:GLU:CB	2.35	0.53
6:L:395:THR:HA	6:L:404:LEU:CD1	2.34	0.53
6:L:497:VAL:O	6:L:500:ILE:HB	2.09	0.53
2:H:183:ILE:HD13	2:H:205:MET:HE2	1.91	0.52
3:I:98:VAL:HG12	3:I:100:LEU:HG	1.91	0.52
3:I:1089:GLU:HA	3:I:1213:TYR:HE1	1.73	0.52
4:J:114:ILE:HD11	4:J:311:ARG:CB	2.35	0.52
6:L:123:ILE:HG13	6:L:375:ALA:CB	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:157:ARG:NE	6:L:159:SER:HB3	2.19	0.52
2:G:19:VAL:HG12	2:G:24:ALA:HA	1.91	0.52
2:G:182:ARG:O	2:G:183:ILE:HD13	2.09	0.52
2:H:183:ILE:HD13	2:H:205:MET:CE	2.39	0.52
3:I:4:SER:O	3:I:8:LYS:HG3	2.10	0.52
3:I:38:PHE:HE2	3:I:127:ILE:HD12	1.73	0.52
3:I:301:TYR:OH	3:I:332:ARG:HG3	2.10	0.52
3:I:610:GLU:HB3	3:I:614:TYR:HE1	1.74	0.52
4:J:937:ILE:HD11	4:J:1134:ILE:HG13	1.86	0.52
4:J:1105:ALA:O	4:J:1107:VAL:HG23	2.09	0.52
3:I:17:LYS:H	3:I:17:LYS:HD2	1.74	0.52
3:I:61:SER:OG	3:I:66:SER:HB2	2.10	0.52
3:I:317:LEU:HD13	3:I:322:LEU:N	2.23	0.52
3:I:819:SER:CB	3:I:1085:MET:HG3	2.39	0.52
3:I:960:LEU:HA	3:I:963:GLU:HG3	1.90	0.52
3:I:1211:ARG:NH1	3:I:1213:TYR:OH	2.42	0.52
4:J:1367:GLN:O	4:J:1370:MET:N	2.41	0.52
6:L:235:ILE:HD13	6:L:245:ALA:HB1	1.91	0.52
6:L:309:ASN:ND2	6:L:314:THR:HB	2.24	0.52
6:L:455:HIS:HA	6:L:458:GLU:HB2	1.89	0.52
1:N:70:LYS:NZ	3:I:438:GLY:HA2	2.25	0.52
3:I:39:ILE:CD1	3:I:75:LEU:HG	2.39	0.52
3:I:208:ILE:HG23	3:I:209:ILE:HD13	1.92	0.52
4:J:260:PHE:HB2	6:L:504:PRO:HB3	1.91	0.52
4:J:1003:LEU:HA	4:J:1017:VAL:O	2.10	0.52
1:N:8:ALA:HB2	4:J:786:THR:CG2	2.35	0.52
3:I:324:LYS:O	3:I:327:GLN:HG2	2.10	0.52
3:I:533:LEU:HD21	3:I:571:LEU:HD13	1.91	0.52
3:I:551:HIS:CE1	3:I:553:THR:HG23	2.44	0.52
3:I:877:VAL:CG1	3:I:920:VAL:HG21	2.39	0.52
3:I:1107:MET:CE	4:J:739:GLN:HG2	2.40	0.52
3:I:1166:ASP:H	3:I:1168:GLU:H	1.57	0.52
3:I:1248:THR:CG2	6:L:531:PRO:HG2	2.38	0.52
4:J:925:GLU:CG	4:J:926:PRO:HD3	2.35	0.52
6:L:166:VAL:CG2	6:L:260:ARG:HG3	2.38	0.52
6:L:253:SER:O	6:L:256:PHE:HB3	2.09	0.52
3:I:299:LYS:HB3	3:I:334:GLU:OE1	2.09	0.52
3:I:577:VAL:HG23	3:I:661:VAL:O	2.09	0.52
4:J:71:LEU:H	4:J:90:VAL:HG11	1.74	0.52
4:J:357:VAL:HG13	4:J:451:PRO:HG3	1.91	0.52
4:J:1176:VAL:HG13	4:J:1186:TYR:O	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:260:LEU:HB3	2:M:262:LEU:HG	1.91	0.52
2:M:292:THR:HB	2:M:295:LEU:CB	2.39	0.52
1:N:13:GLU:HA	1:N:16:THR:HG22	1.92	0.52
1:N:52:PHE:HE2	4:J:673:VAL:HG12	1.74	0.52
2:H:192:VAL:HG22	2:H:193:GLU:H	1.75	0.52
3:I:158:ASP:OD1	3:I:159:SER:N	2.42	0.52
3:I:233:ARG:HB2	3:I:238:GLN:HB2	1.92	0.52
3:I:615:VAL:N	3:I:651:ASP:OD2	2.38	0.52
10:I:1401:1N7:H31	10:I:1401:1N7:H5	1.92	0.52
4:J:411:ILE:O	4:J:415:VAL:HG13	2.09	0.52
4:J:924:GLY:O	4:J:927:GLY:N	2.39	0.52
4:J:1030:GLU:HG2	4:J:1031:VAL:HG23	1.91	0.52
4:J:1064:SER:HA	4:J:1067:ARG:CG	2.40	0.52
4:J:1064:SER:HB3	4:J:1072:LYS:CE	2.39	0.52
4:J:1194:ARG:HG3	4:J:1212:ASP:HB2	1.91	0.52
7:O:20:DA:H2"	7:O:21:DA:C8	2.43	0.52
3:I:452:ARG:NH1	3:I:584:TYR:O	2.26	0.52
3:I:549:ASP:OD1	3:I:550:VAL:N	2.43	0.52
3:I:800:MET:HG3	3:I:1096:ILE:HD12	1.91	0.52
4:J:58:CYS:H	4:J:62:PHE:HD2	1.57	0.52
4:J:719:PHE:CD1	4:J:724:MET:HE1	2.45	0.52
4:J:1042:ASP:HA	4:J:1046:ILE:O	2.10	0.52
4:J:1051:ASP:N	4:J:1056:LEU:O	2.42	0.52
4:J:1067:ARG:CD	4:J:1072:LYS:HA	2.40	0.52
6:L:98:VAL:O	6:L:102:MET:HG2	2.09	0.52
6:L:228:TYR:O	6:L:231:THR:N	2.40	0.52
6:L:347:ILE:HG22	6:L:355:ILE:HD12	1.92	0.52
6:L:402:LEU:HA	6:L:405:ILE:CD1	2.39	0.52
6:L:564:GLY:HA2	6:L:569:THR:HG23	1.92	0.52
2:M:282:VAL:CB	2:M:316:MET:HB2	2.34	0.52
3:I:28:LEU:CD1	3:I:527:LYS:HD3	2.39	0.52
3:I:667:LEU:HD21	3:I:705:GLU:HG2	1.92	0.52
3:I:994:ARG:HA	3:I:997:TRP:CE2	2.45	0.52
4:J:322:ARG:NH1	6:L:510:PRO:HG3	2.21	0.52
6:L:81:ALA:HA	6:L:84:LEU:CG	2.40	0.52
6:L:393:LYS:HD2	8:P:35:DA:N7	2.24	0.52
2:G:9:LEU:HD23	2:G:9:LEU:H	1.74	0.52
2:G:224:LEU:HD23	2:G:228:LEU:HD23	1.91	0.52
3:I:1245:ALA:O	4:J:375:GLU:HG2	2.09	0.52
3:I:1247:SER:OG	3:I:1248:THR:N	2.43	0.52
4:J:161:THR:CG2	4:J:164:GLN:H	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:612:LEU:HD23	4:J:616:PRO:CB	2.40	0.52
4:J:1056:LEU:HD21	4:J:1108:GLN:HE21	1.75	0.52
4:J:1079:LYS:HG3	4:J:1098:GLN:HB3	1.92	0.52
6:L:9:LEU:HA	6:L:12:LEU:HD23	1.91	0.52
6:L:114:GLU:HA	6:L:117:ILE:CD1	2.39	0.52
6:L:540:LEU:HA	6:L:610:PHE:HE2	1.74	0.52
2:H:62:ASP:OD2	2:H:71:LYS:NZ	2.41	0.51
3:I:7:GLU:O	3:I:11:ILE:HB	2.10	0.51
3:I:105:TYR:HA	3:I:115:LYS:H	1.75	0.51
3:I:563:THR:CG2	3:I:570:GLY:H	2.24	0.51
3:I:685:MET:HG3	3:I:1235:LEU:CD1	2.28	0.51
3:I:733:VAL:CG2	3:I:748:ILE:HD12	2.40	0.51
4:J:120:LEU:HB2	4:J:121:PRO:HD3	1.92	0.51
4:J:128:LEU:O	4:J:130:MET:HG3	2.09	0.51
4:J:343:LEU:HD22	4:J:1351:VAL:CG1	2.39	0.51
4:J:407:VAL:O	4:J:411:ILE:HG12	2.11	0.51
4:J:857:LEU:HD11	4:J:871:LEU:HD22	1.92	0.51
6:L:336:GLU:HA	6:L:339:ARG:CD	2.35	0.51
6:L:593:LYS:HE2	6:L:596:ARG:NH1	2.24	0.51
2:G:73:GLY:O	2:G:134:THR:OG1	2.19	0.51
2:H:65:LEU:HB3	2:H:69:SER:HB2	1.92	0.51
2:H:180:VAL:HA	2:H:207:THR:HA	1.92	0.51
3:I:189:ASP:OD2	3:I:191:LYS:HB2	2.10	0.51
3:I:629:PHE:CE2	3:I:634:VAL:HG21	2.46	0.51
3:I:1293:VAL:HG21	3:I:1304:MET:HB2	1.92	0.51
4:J:281:ARG:HA	4:J:284:ASP:OD1	2.10	0.51
4:J:386:GLU:OE2	4:J:394:ILE:HG13	2.10	0.51
4:J:1272:SER:OG	4:J:1273:ASP:N	2.43	0.51
6:L:127:ILE:HG13	6:L:131:GLN:NE2	2.24	0.51
6:L:543:ALA:HB1	6:L:606:VAL:CG2	2.40	0.51
7:O:43:DA:H1'	7:O:44:DA:H5''	1.92	0.51
8:P:45:DA:H1'	8:P:46:DG:C8	2.45	0.51
8:P:62:DG:H2''	8:P:63:DG:C8	2.44	0.51
2:M:266:SER:HA	2:M:269:CYS:HG	1.75	0.51
2:M:282:VAL:HG11	2:M:312:LEU:HD22	1.92	0.51
1:N:64:TYR:CE2	3:I:341:LEU:HB2	2.40	0.51
2:G:50:SER:HB2	2:H:8:PHE:HZ	1.75	0.51
3:I:31:GLN:NE2	3:I:145:ILE:O	2.43	0.51
3:I:49:LEU:HD22	3:I:464:PHE:CE2	2.46	0.51
3:I:61:SER:HB2	3:I:64:GLY:H	1.76	0.51
3:I:221:LEU:HD11	3:I:351:LEU:CD1	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:594:VAL:HG12	3:I:595:THR:O	2.10	0.51
3:I:905:ILE:HA	6:L:595:LEU:CD1	2.41	0.51
3:I:975:ILE:HD13	3:I:998:LEU:HG	1.92	0.51
3:I:1142:ARG:HG3	3:I:1161:LEU:HD22	1.92	0.51
3:I:1246:ARG:HD2	3:I:1265:PHE:O	2.10	0.51
4:J:224:LEU:O	4:J:228:VAL:HG23	2.09	0.51
4:J:253:VAL:HG21	6:L:523:ILE:HG21	1.91	0.51
4:J:482:ALA:HB3	5:K:20:VAL:HG22	1.91	0.51
4:J:518:VAL:HG23	4:J:707:ILE:HD11	1.93	0.51
4:J:555:TYR:HB2	4:J:585:LYS:O	2.10	0.51
4:J:968:ASN:O	4:J:971:GLY:N	2.40	0.51
4:J:1163:VAL:HG13	4:J:1200:GLU:HA	1.93	0.51
5:K:22:VAL:HG23	5:K:25:ARG:HH21	1.76	0.51
6:L:428:SER:HB2	7:O:54:DT:O4	2.10	0.51
6:L:463:LEU:HD22	6:L:483:LEU:HD23	1.91	0.51
2:H:102:LEU:CD2	2:H:115:ILE:HA	2.40	0.51
3:I:130:MET:SD	3:I:134:GLY:HA2	2.50	0.51
3:I:435:ILE:HA	3:I:439:LYS:O	2.11	0.51
4:J:1282:TYR:HH	4:J:1302:TYR:HH	1.56	0.51
6:L:23:THR:HA	6:L:56:MET:O	2.10	0.51
6:L:126:GLY:HA2	6:L:129:GLN:OE1	2.11	0.51
6:L:280:VAL:HB	6:L:347:ILE:HG21	1.93	0.51
2:G:159:ILE:HA	2:G:162:GLU:OE2	2.11	0.51
3:I:16:GLY:O	3:I:1156:ARG:HB3	2.11	0.51
3:I:1103:VAL:CG2	4:J:639:VAL:HG21	2.41	0.51
4:J:759:ILE:HD11	4:J:774:ILE:HG21	1.93	0.51
4:J:1049:GLN:HE22	4:J:1060:VAL:HB	1.75	0.51
6:L:421:TYR:O	6:L:424:GLY:N	2.44	0.51
8:P:49:DT:C2'	8:P:50:DT:H71	2.40	0.51
2:H:41:ASN:O	2:H:45:ARG:HG3	2.11	0.51
2:H:118:ASP:HB3	2:H:121:VAL:HG23	1.92	0.51
3:I:253:PHE:CD1	3:I:288:PRO:HD3	2.45	0.51
3:I:289:VAL:CG1	3:I:319:LEU:HD12	2.39	0.51
3:I:1099:ASN:OD1	3:I:1100:PRO:HD2	2.11	0.51
4:J:364:HIS:HB2	4:J:485:MET:CE	2.40	0.51
4:J:545:HIS:HA	4:J:573:THR:CG2	2.40	0.51
6:L:148:TYR:O	6:L:152:GLU:HG2	2.10	0.51
6:L:385:ARG:HD2	7:O:55:DC:C5'	2.28	0.51
1:N:72:TYR:HB3	3:I:168:GLY:O	2.09	0.51
2:H:91:ARG:HG3	2:H:122:GLU:HB2	1.92	0.51
3:I:813:GLU:HB2	4:J:461:PHE:HD1	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:886:LYS:O	3:I:917:SER:OG	2.19	0.51
3:I:933:VAL:HG22	3:I:1050:VAL:CG1	2.37	0.51
3:I:956:ALA:O	3:I:959:ASP:HB3	2.11	0.51
3:I:994:ARG:HA	3:I:997:TRP:CD2	2.45	0.51
7:O:30:DC:H2''	7:O:31:DA:C8	2.45	0.51
2:H:19:VAL:CG2	2:H:23:HIS:HB3	2.41	0.51
3:I:725:GLN:OE1	3:I:735:LYS:HB2	2.11	0.51
3:I:732:ILE:CD1	3:I:769:PRO:HB3	2.31	0.51
4:J:161:THR:H	4:J:164:GLN:HB2	1.76	0.51
4:J:885:VAL:HG12	4:J:1258:ARG:HD2	1.92	0.51
4:J:975:ILE:HG12	4:J:1001:ALA:HB3	1.92	0.51
5:K:54:ILE:HD13	5:K:59:ILE:O	2.10	0.51
6:L:385:ARG:HB3	7:O:54:DT:O3'	2.11	0.51
7:O:44:DA:H5'	7:O:44:DA:C8	2.46	0.51
8:P:46:DG:H2''	8:P:47:DC:C6	2.46	0.51
2:M:253:LEU:HD22	2:M:318:LEU:HD13	1.93	0.51
2:H:33:ARG:HG3	2:H:197:ASP:OD2	2.11	0.51
2:H:84:ASN:HD21	4:J:551:ARG:HH12	1.59	0.51
3:I:26:TYR:HA	3:I:711:ASP:OD1	2.10	0.51
3:I:60:GLN:HA	3:I:67:GLU:HG3	1.92	0.51
3:I:188:PHE:HE2	3:I:436:ARG:HG2	1.76	0.51
3:I:672:GLU:HG3	3:I:673:HIS:CD2	2.45	0.51
3:I:811:ASN:HA	3:I:815:SER:CB	2.37	0.51
3:I:858:GLY:N	3:I:861:ALA:HB3	2.26	0.51
4:J:949:SER:HA	4:J:1020:TRP:CZ3	2.46	0.51
5:K:62:GLN:O	5:K:66:VAL:HG12	2.11	0.51
7:O:41:DT:O2	8:P:46:DG:N2	2.44	0.51
2:H:42:ALA:O	2:H:46:ILE:HG12	2.10	0.51
3:I:30:ILE:HG22	3:I:31:GLN:OE1	2.10	0.51
3:I:887:VAL:HG23	3:I:913:VAL:HG21	1.93	0.51
3:I:898:GLU:HG3	6:L:565:ILE:HG12	1.93	0.51
3:I:1184:THR:HG23	3:I:1189:GLY:CA	2.41	0.51
4:J:19:ALA:HA	4:J:1343:GLU:HA	1.92	0.51
4:J:518:VAL:HG11	4:J:714:GLU:OE2	2.10	0.51
4:J:826:ILE:CG1	4:J:831:VAL:HG13	2.41	0.51
4:J:865:HIS:CE1	4:J:867:GLN:HB2	2.46	0.51
4:J:1167:LYS:HG2	4:J:1168:GLU:H	1.75	0.51
4:J:1176:VAL:CG1	4:J:1184:ASP:HB2	2.41	0.51
6:L:544:THR:O	6:L:548:LEU:HB2	2.11	0.51
6:L:565:ILE:HG22	6:L:566:ASP:OD2	2.11	0.51
8:P:42:DT:C2'	8:P:43:DT:H72	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:124:VAL:HG11	2:G:210:THR:CG2	2.41	0.50
2:H:13:LEU:HB2	2:H:29:GLU:HG3	1.92	0.50
2:H:100:LEU:HD23	2:H:115:ILE:CG2	2.41	0.50
2:H:211:ILE:HD11	2:H:215:GLU:HB3	1.93	0.50
3:I:55:SER:OG	3:I:465:ARG:HD2	2.11	0.50
3:I:519:ASN:HB3	3:I:522:SER:H	1.76	0.50
3:I:726:TYR:HA	3:I:773:LEU:CD1	2.41	0.50
3:I:810:TYR:CZ	3:I:1078:LYS:HD2	2.46	0.50
3:I:898:GLU:OE2	6:L:565:ILE:HA	2.12	0.50
3:I:976:ARG:CZ	3:I:989:LEU:HB3	2.41	0.50
3:I:1002:LEU:HD23	3:I:1003:THR:N	2.26	0.50
4:J:189:LEU:HD13	4:J:234:PRO:CB	2.41	0.50
4:J:681:LYS:O	4:J:685:ILE:HG12	2.12	0.50
4:J:1032:SER:HA	4:J:1116:SER:C	2.32	0.50
4:J:1052:GLU:HA	4:J:1055:GLY:CA	2.40	0.50
4:J:1067:ARG:CZ	4:J:1072:LYS:HA	2.40	0.50
4:J:1167:LYS:NZ	4:J:1168:GLU:O	2.44	0.50
4:J:1176:VAL:HG11	4:J:1184:ASP:O	2.10	0.50
6:L:322:MET:HB3	6:L:324:LYS:HG3	1.93	0.50
2:M:267:ALA:O	2:M:271:LYS:HG3	2.11	0.50
1:N:37:CYS:O	1:N:41:GLY:N	2.42	0.50
3:I:263:VAL:HG12	3:I:267:ARG:HG3	1.93	0.50
3:I:1059:ARG:NH1	3:I:1059:ARG:HB2	2.26	0.50
4:J:1327:GLU:CD	4:J:1330:ARG:HB2	2.31	0.50
5:K:26:ARG:NH1	5:K:29:GLN:HB2	2.27	0.50
6:L:277:MET:HA	6:L:280:VAL:CG1	2.41	0.50
6:L:593:LYS:O	6:L:593:LYS:HD3	2.11	0.50
8:P:36:DT:H2'	8:P:37:DG:H3'	1.93	0.50
3:I:448:LEU:HB2	3:I:553:THR:OG1	2.12	0.50
3:I:734:ILE:O	3:I:734:ILE:HG13	2.11	0.50
3:I:1146:GLN:OE1	3:I:1161:LEU:HD13	2.11	0.50
4:J:34:SER:OG	4:J:35:PHE:N	2.45	0.50
4:J:67:ASP:OD1	4:J:95:THR:HG22	2.12	0.50
4:J:952:VAL:HG22	4:J:1015:GLU:HB3	1.93	0.50
8:P:54:DT:C2'	8:P:55:DT:H5'	2.38	0.50
8:P:68:DG:H5''	2:M:294:ASN:O	2.11	0.50
1:N:24:ARG:O	1:N:27:ILE:HG22	2.12	0.50
2:G:107:ILE:HG13	2:G:135:ASP:O	2.11	0.50
2:H:68:TYR:CE1	2:H:78:ILE:HB	2.46	0.50
2:H:89:ALA:HB3	2:H:124:VAL:HG12	1.94	0.50
3:I:149:LEU:HD22	3:I:530:ILE:CG2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:146:VAL:HA	4:J:178:ALA:HB2	1.94	0.50
4:J:475:GLU:HG3	5:K:24:ALA:HB1	1.93	0.50
4:J:1031:VAL:HA	4:J:1117:SER:OG	2.11	0.50
4:J:1079:LYS:HA	4:J:1098:GLN:HA	1.93	0.50
6:L:429:THR:HA	7:O:53:DT:H72	1.93	0.50
2:H:102:LEU:HB2	2:H:142:MET:HG2	1.92	0.50
3:I:226:GLU:HG2	3:I:227:LYS:H	1.76	0.50
3:I:300:ASP:HA	3:I:312:ALA:HA	1.94	0.50
3:I:898:GLU:HB3	6:L:540:LEU:CD2	2.41	0.50
4:J:101:ARG:O	4:J:246:PRO:HG3	2.12	0.50
4:J:167:ASP:HA	4:J:170:GLU:HB3	1.93	0.50
4:J:545:HIS:HA	4:J:573:THR:HG23	1.94	0.50
4:J:801:VAL:O	4:J:805:GLN:HB2	2.11	0.50
3:I:108:GLU:HG3	3:I:108:GLU:O	2.10	0.50
3:I:219:GLN:O	3:I:223:LEU:HG	2.11	0.50
3:I:396:ASP:OD1	3:I:418:GLY:HA3	2.12	0.50
3:I:1129:ASN:O	3:I:1133:LYS:HG2	2.12	0.50
3:I:1172:LEU:O	3:I:1176:LEU:HG	2.12	0.50
4:J:294:ASN:O	4:J:298:MET:HG3	2.11	0.50
4:J:509:GLY:HA3	4:J:632:ALA:HB2	1.93	0.50
4:J:1040:MET:SD	4:J:1077:ALA:N	2.85	0.50
4:J:1318:SER:HB3	4:J:1321:SER:OG	2.12	0.50
8:P:66:DT:C6	8:P:67:DT:H72	2.46	0.50
3:I:857:VAL:CG2	3:I:862:LEU:HD21	2.42	0.50
3:I:1275:VAL:HG13	3:I:1287:LEU:HD11	1.93	0.50
4:J:1271:SER:O	4:J:1271:SER:OG	2.25	0.50
6:L:390:ILE:CD1	6:L:432:THR:HG23	2.41	0.50
6:L:412:LEU:O	6:L:412:LEU:HD12	2.12	0.50
6:L:605:GLU:O	6:L:608:ARG:HB2	2.10	0.50
2:H:193:GLU:HG2	2:H:194:GLN:N	2.26	0.50
3:I:238:GLN:HB3	3:I:284:LEU:HD21	1.94	0.50
3:I:670:PHE:CZ	3:I:1117:LEU:HD13	2.46	0.50
3:I:794:LEU:HD21	3:I:796:LEU:HD11	1.93	0.50
3:I:1306:LYS:O	3:I:1309:VAL:HG22	2.12	0.50
4:J:134:ASP:O	4:J:138:VAL:HG23	2.12	0.50
4:J:368:LEU:HD23	4:J:373:ALA:CB	2.38	0.50
4:J:788:LEU:O	4:J:788:LEU:HD23	2.12	0.50
6:L:40:GLN:O	6:L:44:ILE:HG22	2.12	0.50
6:L:287:ILE:HA	6:L:337:VAL:CG1	2.37	0.50
6:L:333:VAL:CG2	6:L:336:GLU:HB3	2.42	0.50
6:L:551:LEU:CD2	6:L:598:LEU:HD21	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:551:LEU:HD12	6:L:556:ALA:HA	1.93	0.50
1:N:48:ARG:HE	1:N:55:VAL:HG11	1.77	0.50
2:G:39:LEU:O	2:G:43:LEU:HG	2.12	0.50
2:H:100:LEU:HD23	2:H:115:ILE:HG21	1.93	0.50
3:I:178:PRO:HA	3:I:397:LEU:HG	1.94	0.50
3:I:351:LEU:HD23	3:I:354:ASP:OD1	2.12	0.50
3:I:1184:THR:HG23	3:I:1189:GLY:HA3	1.94	0.50
4:J:358:GLY:HA3	4:J:448:GLN:OE1	2.12	0.50
4:J:1231:ARG:O	4:J:1235:ASN:HB2	2.12	0.50
6:L:385:ARG:CB	7:O:54:DT:H1'	2.42	0.50
2:G:12:ARG:H	2:G:30:PRO:HD2	1.76	0.49
2:H:104:LYS:N	2:H:140:ILE:O	2.44	0.49
3:I:871:VAL:CG2	3:I:928:VAL:HG11	2.41	0.49
3:I:921:PRO:HD2	3:I:924:VAL:CG2	2.42	0.49
3:I:1132:LEU:HD11	3:I:1170:MET:SD	2.52	0.49
3:I:1222:GLU:OE1	3:I:1222:GLU:N	2.45	0.49
4:J:967:VAL:HG13	4:J:971:GLY:C	2.32	0.49
6:L:298:PRO:HD2	6:L:326:TRP:CZ2	2.47	0.49
6:L:401:PHE:O	6:L:405:ILE:HG23	2.12	0.49
6:L:540:LEU:O	6:L:544:THR:HG23	2.12	0.49
6:L:567:MET:HG3	6:L:569:THR:CB	2.28	0.49
6:L:586:ARG:HH21	7:O:24:DC:H2'	1.77	0.49
2:G:104:LYS:HD2	2:G:105:SER:H	1.77	0.49
3:I:26:TYR:O	3:I:29:SER:HB3	2.11	0.49
3:I:254:ASP:N	3:I:265:LYS:HG2	2.28	0.49
3:I:453:ILE:HD12	3:I:587:LEU:HG	1.95	0.49
3:I:812:PHE:CZ	4:J:503:SER:HB2	2.44	0.49
4:J:393:THR:HG21	6:L:610:PHE:CE1	2.47	0.49
4:J:955:LYS:HE2	4:J:1010:GLN:HE22	1.76	0.49
4:J:1266:ILE:HD12	4:J:1278:GLU:O	2.12	0.49
4:J:1267:VAL:HB	4:J:1301:THR:C	2.32	0.49
6:L:80:ALA:HA	6:L:83:VAL:CG1	2.38	0.49
6:L:81:ALA:HA	6:L:84:LEU:CD2	2.41	0.49
6:L:394:TYR:HD2	6:L:439:ILE:HG21	1.78	0.49
6:L:576:VAL:HG13	6:L:587:ILE:HG21	1.93	0.49
1:N:21:ASN:O	1:N:25:GLN:HG2	2.11	0.49
1:N:36:LEU:HD23	1:N:43:PRO:CA	2.42	0.49
1:N:44:ILE:O	1:N:49:ARG:HD3	2.13	0.49
2:H:48:LEU:HD23	2:H:183:ILE:HG22	1.94	0.49
3:I:6:THR:O	3:I:9:LYS:HB2	2.12	0.49
3:I:361:SER:HA	3:I:364:VAL:CG2	2.40	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:593:LYS:HA	3:I:652:TYR:CD1	2.47	0.49
3:I:594:VAL:HG13	3:I:598:VAL:O	2.12	0.49
3:I:949:GLU:O	3:I:953:LEU:HG	2.13	0.49
4:J:39:LYS:HB2	4:J:54:ASP:OD1	2.13	0.49
4:J:134:ASP:OD1	4:J:159:ILE:HD13	2.12	0.49
4:J:902:ASP:H	4:J:1251:LYS:NZ	2.11	0.49
6:L:51:MET:HB3	6:L:53:ILE:HG13	1.94	0.49
6:L:248:GLU:HG2	6:L:251:LYS:NZ	2.27	0.49
3:I:963:GLU:HA	3:I:966:ILE:HD11	1.94	0.49
3:I:1142:ARG:NH2	3:I:1165:SER:HB3	2.22	0.49
3:I:1251:TYR:HB2	6:L:528:LEU:CD1	2.42	0.49
4:J:113:HIS:CE1	4:J:115:TRP:HB2	2.47	0.49
4:J:865:HIS:HD1	4:J:867:GLN:H	1.59	0.49
4:J:968:ASN:HB2	4:J:1118:GLY:O	2.13	0.49
4:J:1116:SER:N	4:J:1119:ASP:OD2	2.20	0.49
6:L:22:LEU:HB3	6:L:26:GLU:OE1	2.12	0.49
6:L:48:ILE:CG2	6:L:55:VAL:HG11	2.30	0.49
6:L:470:MET:O	6:L:474:MET:HG3	2.11	0.49
6:L:586:ARG:HE	7:O:24:DC:C2'	2.25	0.49
8:P:40:DC:C2'	8:P:41:DT:H72	2.43	0.49
2:G:221:ALA:HB3	2:H:231:PHE:HB3	1.95	0.49
2:H:201:LEU:HG	2:H:203:ILE:CG1	2.42	0.49
3:I:57:PHE:HD1	3:I:59:ILE:HG13	1.78	0.49
3:I:117:ILE:HG13	3:I:117:ILE:O	2.13	0.49
4:J:196:GLN:O	4:J:199:GLU:HG3	2.12	0.49
4:J:365:GLN:HB2	4:J:438:GLU:O	2.12	0.49
4:J:805:GLN:OE1	4:J:1348:LYS:HB2	2.12	0.49
4:J:903:LEU:HB2	4:J:905:ARG:O	2.11	0.49
4:J:1267:VAL:HB	4:J:1301:THR:HB	1.95	0.49
6:L:147:GLN:HG3	6:L:265:GLN:OE1	2.12	0.49
6:L:158:LEU:HD22	6:L:218:ARG:CD	2.43	0.49
6:L:305:LEU:CD1	6:L:319:ALA:HB2	2.43	0.49
1:N:14:GLN:HG2	10:N:102:1N7:H4	1.95	0.49
2:H:89:ALA:HB3	2:H:124:VAL:CG1	2.43	0.49
3:I:619:ALA:HB2	3:I:654:ASP:HB2	1.94	0.49
3:I:1004:ASP:OD1	3:I:1004:ASP:N	2.46	0.49
4:J:17:PHE:HE2	4:J:20:ILE:HG12	1.78	0.49
4:J:355:ILE:HG21	4:J:466:MET:CG	2.37	0.49
4:J:367:GLY:CA	4:J:448:GLN:HB2	2.42	0.49
4:J:664:ILE:HG22	4:J:678:ARG:HG2	1.93	0.49
4:J:960:LEU:CB	4:J:963:VAL:HB	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:976:THR:HA	4:J:999:TYR:HE1	1.76	0.49
4:J:1146:GLU:OE2	4:J:1310:THR:HG22	2.12	0.49
6:L:322:MET:HG2	6:L:324:LYS:NZ	2.27	0.49
1:N:37:CYS:CB	1:N:58:CYS:H	2.25	0.49
2:G:90:VAL:HA	2:G:124:VAL:HG13	1.95	0.49
2:H:107:ILE:HG13	2:H:135:ASP:HA	1.95	0.49
3:I:88:ARG:NH2	3:I:1035:LYS:O	2.41	0.49
3:I:420:LEU:CD1	3:I:425:ILE:HD11	2.43	0.49
3:I:794:LEU:CD2	3:I:796:LEU:HD11	2.43	0.49
3:I:1165:SER:OG	3:I:1169:VAL:HG22	2.13	0.49
3:I:1287:LEU:HD13	4:J:1357:ILE:HD11	1.94	0.49
4:J:181:GLY:O	4:J:185:ILE:HG12	2.13	0.49
4:J:859:PRO:HD2	4:J:862:THR:CG2	2.43	0.49
4:J:1162:ILE:HA	4:J:1202:GLU:O	2.12	0.49
2:G:124:VAL:HG11	2:G:210:THR:HG22	1.93	0.49
3:I:898:GLU:OE2	6:L:565:ILE:HG12	2.13	0.49
3:I:1256:GLN:OE1	6:L:528:LEU:HD21	2.13	0.49
4:J:71:LEU:N	4:J:90:VAL:HG11	2.28	0.49
4:J:129:ASP:HB2	4:J:220:ARG:HH22	1.78	0.49
4:J:949:SER:HB3	4:J:1016:THR:CG2	2.43	0.49
4:J:1357:ILE:CG2	4:J:1358:PRO:HD2	2.43	0.49
6:L:435:ILE:O	6:L:439:ILE:HG12	2.12	0.49
6:L:439:ILE:HG22	6:L:443:ILE:HD12	1.94	0.49
6:L:454:VAL:O	6:L:458:GLU:HB2	2.12	0.49
6:L:593:LYS:HG2	6:L:596:ARG:HH11	1.78	0.49
2:G:89:ALA:O	2:G:124:VAL:HG22	2.12	0.49
3:I:103:VAL:HG12	3:I:117:ILE:HG22	1.95	0.49
3:I:359:ARG:HD3	3:I:360:LEU:HD12	1.95	0.49
3:I:930:ASP:OD1	3:I:931:VAL:N	2.45	0.49
3:I:976:ARG:NE	3:I:989:LEU:HD23	2.28	0.49
4:J:311:ARG:NH2	4:J:1329:THR:HG21	2.28	0.49
4:J:425:ARG:HD2	4:J:459:ALA:HB2	1.94	0.49
4:J:926:PRO:CG	4:J:1248:ILE:HD11	2.42	0.49
4:J:1047:THR:HG22	4:J:1062:LEU:HD21	1.94	0.49
6:L:23:THR:HG21	6:L:58:GLU:O	2.12	0.49
6:L:575:GLU:OE2	6:L:578:LYS:NZ	2.26	0.49
7:O:23:DC:H2''	7:O:24:DC:C5'	2.43	0.49
2:G:102:LEU:HD23	2:G:144:ILE:HD11	1.94	0.49
2:G:175:ALA:HB1	2:G:177:TYR:CZ	2.48	0.49
3:I:221:LEU:HD23	3:I:336:LEU:CD1	2.29	0.49
3:I:624:ASP:HB2	3:I:630:VAL:HG12	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:708:ASN:HB2	4:J:711:GLY:O	2.13	0.49
4:J:1163:VAL:CG2	4:J:1175:LEU:HD21	2.43	0.49
4:J:1278:GLU:HG2	4:J:1279:GLN:H	1.78	0.49
6:L:45:ILE:O	6:L:48:ILE:HG22	2.12	0.49
6:L:234:THR:C	6:L:245:ALA:HB2	2.33	0.49
2:M:257:VAL:O	2:M:260:LEU:HB2	2.13	0.49
3:I:130:MET:CG	3:I:134:GLY:HA2	2.43	0.48
3:I:202:ARG:HH12	3:I:368:ARG:HH22	1.61	0.48
3:I:214:ASN:ND2	3:I:359:ARG:HH21	2.10	0.48
3:I:895:LEU:HD23	3:I:895:LEU:H	1.78	0.48
4:J:260:PHE:HB3	6:L:504:PRO:HB3	1.95	0.48
4:J:1321:SER:HB3	4:J:1349:GLU:CD	2.32	0.48
6:L:220:LYS:O	6:L:223:GLU:HB3	2.12	0.48
6:L:569:THR:OG1	6:L:570:ASP:N	2.43	0.48
2:M:252:ILE:HG22	2:M:312:LEU:HD21	1.95	0.48
2:M:304:LYS:CG	2:M:314:LEU:HD11	2.43	0.48
3:I:361:SER:O	3:I:365:GLU:HG2	2.13	0.48
3:I:538:LEU:HD21	3:I:547:VAL:HG11	1.94	0.48
3:I:1239:VAL:O	3:I:1242:LYS:N	2.40	0.48
4:J:164:GLN:HA	4:J:167:ASP:OD1	2.13	0.48
4:J:410:ASP:O	4:J:414:GLU:HG3	2.13	0.48
4:J:766:GLY:C	4:J:767:LEU:HD12	2.34	0.48
4:J:930:LEU:HD11	4:J:1241:TYR:CE1	2.49	0.48
4:J:1027:VAL:HG13	4:J:1121:LEU:HD22	1.95	0.48
6:L:111:LEU:HD12	6:L:382:ALA:HB3	1.95	0.48
6:L:339:ARG:O	6:L:342:GLN:N	2.47	0.48
6:L:530:LEU:O	6:L:533:ASP:N	2.46	0.48
2:M:289:LEU:O	2:M:295:LEU:HD13	2.13	0.48
2:H:58:GLU:HB2	2:H:171:LEU:O	2.13	0.48
3:I:122:VAL:HG21	3:I:493:ILE:CD1	2.43	0.48
3:I:732:ILE:HD11	3:I:769:PRO:CB	2.32	0.48
3:I:754:THR:H	3:I:767:GLN:CG	2.25	0.48
3:I:1165:SER:OG	3:I:1169:VAL:HG13	2.11	0.48
4:J:1024:THR:OG1	4:J:1024:THR:O	2.32	0.48
4:J:1047:THR:HG22	4:J:1062:LEU:HD11	1.95	0.48
5:K:60:ASN:OD1	5:K:63:ILE:HD13	2.13	0.48
6:L:132:CYS:O	6:L:136:GLU:HG2	2.13	0.48
6:L:529:GLU:HG2	6:L:534:SER:OG	2.13	0.48
2:G:153:VAL:HB	2:G:175:ALA:HB3	1.95	0.48
2:H:104:LYS:HD3	2:H:110:VAL:HG22	1.95	0.48
3:I:9:LYS:HD3	3:I:791:LEU:HD22	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:105:TYR:C	3:I:115:LYS:HB2	2.33	0.48
3:I:141:THR:O	3:I:143:ARG:HG3	2.14	0.48
3:I:738:GLU:HA	3:I:741:MET:HB2	1.94	0.48
3:I:802:VAL:HG12	3:I:1228:GLY:O	2.13	0.48
3:I:976:ARG:HH12	3:I:990:ASP:CB	2.27	0.48
3:I:1136:GLN:HB3	3:I:1137:GLU:OE1	2.12	0.48
4:J:342:LEU:O	4:J:343:LEU:HD23	2.13	0.48
4:J:859:PRO:HD2	4:J:862:THR:HG21	1.95	0.48
4:J:1034:PHE:CE1	4:J:1114:GLN:HG3	2.48	0.48
6:L:268:TYR:O	6:L:272:SER:N	2.40	0.48
6:L:362:ASN:HA	6:L:365:MET:HE2	1.95	0.48
6:L:507:MET:HG2	6:L:520:GLY:HA3	1.94	0.48
7:O:21:DA:H5''	2:M:294:ASN:ND2	2.29	0.48
1:N:35:TYR:O	1:N:43:PRO:HA	2.13	0.48
2:G:57:THR:CG2	2:G:147:GLN:HG2	2.42	0.48
3:I:180:ARG:O	3:I:395:TYR:HA	2.13	0.48
3:I:714:VAL:HB	3:I:786:GLY:HA3	1.94	0.48
4:J:416:ILE:CG2	4:J:439:PRO:HB2	2.43	0.48
4:J:799:ARG:HH12	4:J:1142:ALA:HB1	1.78	0.48
4:J:826:ILE:HD13	4:J:831:VAL:HG22	1.95	0.48
4:J:998:PRO:HG2	4:J:1020:TRP:CE2	2.48	0.48
4:J:1005:LYS:HB3	4:J:1009:GLU:OE1	2.13	0.48
4:J:1064:SER:HA	4:J:1067:ARG:CD	2.43	0.48
4:J:1289:ASN:ND2	4:J:1300:ALA:O	2.43	0.48
6:L:306:PHE:HA	6:L:315:TRP:CB	2.43	0.48
6:L:388:ILE:O	6:L:392:LYS:HG3	2.12	0.48
6:L:583:THR:O	6:L:587:ILE:HG12	2.13	0.48
8:P:63:DG:H2'	8:P:63:DG:OP2	2.13	0.48
2:G:68:TYR:CE1	2:G:79:LEU:HD11	2.49	0.48
2:H:47:LEU:CD2	2:H:180:VAL:HG11	2.42	0.48
2:H:158:ARG:HE	2:H:172:LEU:CD1	2.24	0.48
3:I:57:PHE:HD2	3:I:70:TYR:HB2	1.77	0.48
3:I:94:ALA:O	3:I:126:GLU:HB2	2.14	0.48
3:I:156:PHE:CE1	3:I:177:ILE:HD12	2.47	0.48
3:I:198:ILE:CG2	3:I:388:LEU:HD21	2.43	0.48
3:I:296:VAL:O	3:I:335:THR:HG23	2.14	0.48
3:I:897:PRO:O	3:I:898:GLU:HB2	2.14	0.48
3:I:1107:MET:SD	4:J:739:GLN:HG2	2.52	0.48
3:I:1216:ARG:HD3	3:I:1216:ARG:H	1.79	0.48
3:I:1279:GLU:OE2	4:J:1347:LEU:HB3	2.13	0.48
4:J:152:THR:OG1	4:J:153:ASN:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:437:PHE:HZ	4:J:453:VAL:HG11	1.79	0.48
4:J:842:ARG:NH2	4:J:1254:GLU:OE1	2.44	0.48
4:J:1061:VAL:CB	4:J:1105:ALA:HB3	2.43	0.48
4:J:1160:SER:CB	4:J:1205:GLU:HA	2.43	0.48
4:J:1239:ASP:HA	4:J:1242:ARG:HB2	1.96	0.48
6:L:267:ASP:HA	6:L:270:VAL:HB	1.96	0.48
2:G:72:GLU:OE1	2:G:72:GLU:N	2.47	0.48
3:I:70:TYR:CZ	3:I:72:SER:HA	2.49	0.48
3:I:338:THR:HA	3:I:343:HIS:O	2.13	0.48
3:I:628:HIS:HB3	3:I:647:ARG:HH21	1.77	0.48
3:I:714:VAL:CG1	3:I:787:PRO:HD2	2.44	0.48
4:J:146:VAL:HG21	4:J:154:LEU:CD2	2.44	0.48
4:J:153:ASN:C	4:J:154:LEU:HD12	2.33	0.48
4:J:926:PRO:HB2	4:J:1248:ILE:HD11	1.94	0.48
4:J:988:PHE:HB2	4:J:990:ARG:HG2	1.96	0.48
4:J:1036:ARG:HB2	4:J:1081:VAL:CG1	2.43	0.48
5:K:37:PRO:HB3	5:K:49:ILE:HG21	1.96	0.48
6:L:150:ARG:HB3	6:L:155:GLU:CG	2.44	0.48
3:I:122:VAL:HG21	3:I:493:ILE:HG21	1.96	0.48
3:I:588:GLU:HG2	3:I:607:SER:CA	2.43	0.48
3:I:828:PHE:O	3:I:1234:LYS:HE2	2.14	0.48
3:I:1325:VAL:O	3:I:1329:GLU:HG3	2.13	0.48
4:J:526:VAL:HA	4:J:549:LYS:O	2.13	0.48
4:J:1147:ALA:HB1	4:J:1218:HIS:CD2	2.48	0.48
4:J:1153:PRO:HD2	4:J:1194:ARG:HH22	1.79	0.48
6:L:600:HIS:NE2	2:M:258:ASP:OD2	2.46	0.48
8:P:51:DC:C2'	8:P:52:DT:H72	2.44	0.48
2:M:304:LYS:O	2:M:304:LYS:HD3	2.14	0.48
2:G:227:GLN:OE1	2:G:227:GLN:HA	2.14	0.48
3:I:4:SER:C	3:I:8:LYS:HE3	2.34	0.48
3:I:228:VAL:O	3:I:335:THR:N	2.47	0.48
3:I:556:GLY:O	3:I:579:ALA:HB2	2.14	0.48
3:I:963:GLU:OE2	3:I:964:LEU:HD22	2.13	0.48
3:I:1192:GLU:HG2	3:I:1196:LYS:HE3	1.96	0.48
4:J:42:GLU:CB	4:J:52:GLU:HG2	2.43	0.48
4:J:161:THR:HG23	4:J:164:GLN:H	1.78	0.48
4:J:364:HIS:HB2	4:J:485:MET:HE2	1.95	0.48
4:J:490:ILE:O	4:J:499:ILE:HG22	2.13	0.48
4:J:1026:PRO:HB2	4:J:1028:ILE:HG23	1.96	0.48
2:G:155:ALA:HA	2:G:158:ARG:HB3	1.96	0.48
2:H:102:LEU:C	2:H:141:SER:HA	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:150:ARG:O	2:H:177:TYR:HB2	2.14	0.48
3:I:61:SER:OG	3:I:66:SER:O	2.23	0.48
3:I:254:ASP:N	3:I:254:ASP:OD1	2.47	0.48
3:I:499:SER:HA	3:I:502:VAL:HG12	1.96	0.48
3:I:1165:SER:OG	3:I:1169:VAL:N	2.46	0.48
4:J:147:ILE:HG13	4:J:177:ASP:O	2.13	0.48
4:J:751:ASP:OD1	4:J:753:SER:N	2.46	0.48
4:J:986:ASP:OD2	4:J:992:LYS:HD2	2.13	0.48
8:P:57:DT:H2''	8:P:58:DC:C5'	2.42	0.48
8:P:68:DG:P	2:M:296:GLY:H	2.37	0.48
2:M:282:VAL:CG1	2:M:312:LEU:HD22	2.44	0.48
2:H:67:GLU:HA	2:H:68:TYR:HA	1.58	0.47
3:I:209:ILE:O	3:I:213:LEU:HG	2.14	0.47
3:I:232:ILE:N	3:I:331:LYS:O	2.42	0.47
3:I:538:LEU:HD12	3:I:538:LEU:O	2.14	0.47
3:I:840:SER:O	3:I:1047:LEU:HB2	2.14	0.47
3:I:1119:MET:HE1	3:I:1210:ILE:HD11	1.95	0.47
3:I:1339:LEU:HD23	4:J:17:PHE:CG	2.48	0.47
4:J:162:GLU:O	4:J:166:LEU:HD23	2.14	0.47
4:J:342:LEU:HD21	4:J:1352:ILE:HG23	1.96	0.47
4:J:347:VAL:HG12	4:J:348:ASP:O	2.14	0.47
4:J:548:VAL:N	4:J:572:THR:O	2.47	0.47
4:J:612:LEU:HD23	4:J:616:PRO:HB2	1.95	0.47
4:J:1009:GLU:O	4:J:1011:VAL:HG13	2.14	0.47
4:J:1237:VAL:CG1	4:J:1253:ILE:HG21	2.44	0.47
5:K:39:VAL:CG2	5:K:40:PRO:HD2	2.44	0.47
6:L:98:VAL:HG13	6:L:402:LEU:HD11	1.95	0.47
6:L:348:GLU:N	6:L:355:ILE:HD11	2.29	0.47
6:L:373:ARG:HA	6:L:376:LYS:HE2	1.96	0.47
6:L:444:ALA:HB1	6:L:457:ILE:CD1	2.34	0.47
6:L:452:ILE:HG13	6:L:457:ILE:CD1	2.39	0.47
6:L:509:THR:HG23	6:L:510:PRO:HD2	1.96	0.47
2:M:289:LEU:HD21	2:M:303:ILE:HG21	1.96	0.47
2:H:102:LEU:CD2	2:H:115:ILE:HG12	2.44	0.47
3:I:120:GLN:NE2	3:I:490:GLN:HB2	2.26	0.47
3:I:877:VAL:HG13	3:I:881:ASP:HB2	1.94	0.47
3:I:979:LEU:HD12	3:I:985:GLU:HG3	1.96	0.47
3:I:1220:GLN:NE2	3:I:1221:PHE:O	2.47	0.47
4:J:18:ASP:OD1	4:J:19:ALA:N	2.47	0.47
4:J:1282:TYR:HD2	4:J:1286:LYS:HB2	1.78	0.47
6:L:432:THR:O	6:L:436:ARG:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:595:LEU:O	6:L:599:ARG:HG3	2.14	0.47
2:H:43:LEU:O	2:H:47:LEU:HD12	2.14	0.47
2:H:64:VAL:HA	2:H:65:LEU:CB	2.44	0.47
3:I:161:LYS:HD2	3:I:170:VAL:HG22	1.96	0.47
3:I:754:THR:H	3:I:767:GLN:HG2	1.78	0.47
4:J:83:VAL:O	4:J:92:VAL:HG12	2.14	0.47
4:J:1174:ARG:HA	4:J:1187:GLU:OE2	2.14	0.47
4:J:1253:ILE:O	4:J:1257:VAL:HG23	2.15	0.47
6:L:348:GLU:CG	6:L:355:ILE:HG12	2.45	0.47
6:L:593:LYS:CA	6:L:596:ARG:HG2	2.42	0.47
3:I:796:LEU:H	3:I:796:LEU:HD12	1.78	0.47
4:J:167:ASP:HA	4:J:170:GLU:CB	2.45	0.47
4:J:858:VAL:HB	4:J:862:THR:OG1	2.15	0.47
4:J:884:SER:OG	4:J:885:VAL:N	2.46	0.47
4:J:975:ILE:CD1	4:J:980:THR:HG21	2.33	0.47
6:L:150:ARG:HB3	6:L:155:GLU:CB	2.44	0.47
2:G:107:ILE:HD11	2:G:136:GLU:HA	1.95	0.47
2:H:86:LYS:HZ2	2:H:174:ASP:HB2	1.78	0.47
3:I:103:VAL:CB	3:I:117:ILE:HG22	2.44	0.47
4:J:271:ARG:O	4:J:275:ARG:HG3	2.15	0.47
4:J:298:MET:HE1	6:L:402:LEU:O	2.14	0.47
4:J:422:LEU:CD1	4:J:471:PRO:HG3	2.44	0.47
4:J:1046:ILE:CD1	4:J:1059:LEU:HD13	2.40	0.47
4:J:1080:ILE:HB	4:J:1097:ALA:HB3	1.95	0.47
4:J:1140:ARG:O	4:J:1144:LEU:HB2	2.15	0.47
6:L:294:GLN:HG3	6:L:295:CYS:SG	2.54	0.47
2:G:192:VAL:HG21	2:G:198:LEU:HD12	1.96	0.47
2:H:144:ILE:HG12	2:H:145:LYS:H	1.80	0.47
3:I:3:TYR:CZ	3:I:11:ILE:HD11	2.49	0.47
3:I:122:VAL:HG21	3:I:493:ILE:HD12	1.97	0.47
3:I:671:LEU:HD23	3:I:1186:VAL:CG2	2.45	0.47
3:I:765:ILE:CD1	3:I:787:PRO:HG3	2.44	0.47
3:I:1213:TYR:CE2	3:I:1220:GLN:HG3	2.50	0.47
3:I:1245:ALA:HB1	4:J:376:LEU:CD2	2.39	0.47
4:J:38:VAL:HG22	4:J:105:ILE:HG12	1.96	0.47
4:J:118:LYS:NZ	4:J:136:GLU:OE2	2.44	0.47
4:J:122:SER:OG	4:J:132:LEU:HD12	2.14	0.47
4:J:164:GLN:HA	4:J:167:ASP:CG	2.35	0.47
6:L:137:TYR:O	6:L:140:ALA:HB3	2.14	0.47
6:L:558:VAL:O	6:L:561:MET:HB2	2.14	0.47
7:O:28:DG:H2''	7:O:29:DA:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:M:285:THR:O	2:M:289:LEU:HD13	2.14	0.47
2:H:152:TYR:OH	4:J:532:GLU:OE2	2.32	0.47
3:I:254:ASP:CB	3:I:265:LYS:HG3	2.45	0.47
3:I:724:VAL:HA	3:I:734:ILE:HG22	1.97	0.47
3:I:848:GLU:CG	3:I:888:THR:HG22	2.40	0.47
3:I:851:THR:OG1	3:I:852:ALA:N	2.47	0.47
3:I:980:VAL:O	3:I:984:VAL:HB	2.15	0.47
3:I:1286:THR:O	3:I:1289:GLU:HG2	2.15	0.47
3:I:1333:LEU:CD2	4:J:327:LEU:HD13	2.44	0.47
3:I:1339:LEU:HD23	4:J:17:PHE:CD1	2.50	0.47
4:J:279:LEU:HD12	4:J:295:GLU:HG3	1.95	0.47
4:J:509:GLY:CA	4:J:632:ALA:HB2	2.43	0.47
4:J:826:ILE:CD1	4:J:831:VAL:HG13	2.45	0.47
4:J:950:ILE:O	4:J:950:ILE:HG13	2.15	0.47
4:J:1023:HIS:C	4:J:1125:PRO:HA	2.35	0.47
6:L:216:LEU:O	6:L:219:GLU:HG2	2.14	0.47
6:L:584:ARG:HH12	8:P:57:DT:H72	1.79	0.47
3:I:48:GLY:N	3:I:461:GLU:OE2	2.48	0.47
4:J:78:LEU:HD12	4:J:78:LEU:O	2.15	0.47
4:J:159:ILE:O	4:J:160:LEU:HD23	2.15	0.47
4:J:244:VAL:HA	4:J:269:TYR:OH	2.14	0.47
4:J:250:ARG:NH1	4:J:266:ASN:OD1	2.48	0.47
4:J:475:GLU:OE1	4:J:475:GLU:N	2.44	0.47
4:J:536:LEU:HD23	4:J:541:LEU:HB2	1.96	0.47
6:L:141:ILE:O	6:L:144:LEU:HB3	2.14	0.47
6:L:234:THR:CG2	6:L:244:THR:HB	2.45	0.47
6:L:293:GLU:OE1	6:L:293:GLU:N	2.48	0.47
2:H:29:GLU:O	2:H:31:LEU:HD22	2.15	0.47
2:H:44:ARG:NH1	4:J:538:ARG:HD2	2.29	0.47
2:H:62:ASP:OD2	2:H:140:ILE:HA	2.15	0.47
2:H:76:GLU:HA	2:H:80:GLU:HG2	1.96	0.47
2:H:201:LEU:HD12	2:H:202:VAL:H	1.79	0.47
3:I:40:GLU:HG2	3:I:41:GLN:N	2.30	0.47
3:I:246:LEU:HB3	3:I:249:GLU:OE2	2.15	0.47
3:I:960:LEU:HD22	3:I:1029:LEU:HD12	1.95	0.47
3:I:967:LEU:HD21	3:I:1025:PHE:HE2	1.79	0.47
4:J:84:ILE:HG22	4:J:91:GLU:HA	1.96	0.47
4:J:514:THR:HB	4:J:576:ARG:HG2	1.97	0.47
4:J:733:SER:O	4:J:737:ILE:HG12	2.14	0.47
4:J:899:TYR:CE1	4:J:1251:LYS:HE2	2.49	0.47
4:J:975:ILE:CD1	4:J:1003:LEU:HD11	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:117:ILE:HG22	6:L:121:LYS:CE	2.44	0.47
6:L:402:LEU:HD12	6:L:402:LEU:H	1.80	0.47
7:O:44:DA:H5'	7:O:44:DA:H8	1.79	0.47
2:G:234:LEU:HD13	2:H:218:ARG:HH21	1.80	0.47
2:H:56:VAL:HG11	2:H:144:ILE:HD11	1.97	0.47
3:I:312:ALA:H	3:I:315:MET:CE	2.28	0.47
3:I:521:LEU:HD12	3:I:667:LEU:CD1	2.44	0.47
3:I:818:VAL:HB	3:I:1076:ILE:HD11	1.97	0.47
3:I:1107:MET:SD	4:J:736:GLN:HB3	2.55	0.47
3:I:1122:LYS:HE2	3:I:1229:TYR:CE2	2.50	0.47
3:I:1214:ASP:HB3	3:I:1217:THR:CG2	2.45	0.47
3:I:1234:LYS:HZ2	3:I:1238:LEU:HD21	1.79	0.47
4:J:556:GLU:HG2	4:J:558:ASP:OD2	2.15	0.47
4:J:605:LEU:HD23	4:J:605:LEU:HA	1.63	0.47
4:J:1017:VAL:O	4:J:1017:VAL:HG12	2.15	0.47
4:J:1222:ARG:NH1	4:J:1223:LEU:HD21	2.29	0.47
5:K:12:LYS:HG3	5:K:54:ILE:O	2.15	0.47
6:L:291:CYS:SG	6:L:330:LEU:HD22	2.55	0.47
1:N:2:SER:OG	1:N:3:ASP:N	2.47	0.46
2:G:192:VAL:CG2	2:G:198:LEU:HD12	2.45	0.46
2:H:61:ILE:HG13	2:H:78:ILE:HD12	1.97	0.46
3:I:156:PHE:HE2	3:I:450:ASN:HB3	1.81	0.46
3:I:242:VAL:HB	3:I:245:ARG:HB3	1.96	0.46
3:I:256:GLU:HB3	3:I:261:VAL:HG13	1.97	0.46
3:I:358:ASP:OD1	3:I:358:ASP:N	2.48	0.46
3:I:895:LEU:HD12	3:I:899:GLU:HG3	1.97	0.46
3:I:1204:LEU:HB3	3:I:1205:PRO:HD2	1.97	0.46
4:J:616:PRO:O	4:J:619:ILE:HG22	2.15	0.46
6:L:123:ILE:HG13	6:L:375:ALA:HB3	1.97	0.46
6:L:324:LYS:HB2	6:L:327:SER:CB	2.45	0.46
6:L:336:GLU:O	6:L:339:ARG:HB2	2.15	0.46
2:M:295:LEU:CD2	2:M:300:LEU:HB2	2.45	0.46
2:G:5:VAL:O	2:H:150:ARG:NH2	2.40	0.46
2:G:39:LEU:HD21	2:H:224:LEU:HD11	1.96	0.46
2:H:59:VAL:O	2:H:171:LEU:HD23	2.14	0.46
2:H:86:LYS:HZ1	2:H:174:ASP:HB2	1.80	0.46
3:I:636:CYS:O	3:I:642:SER:HB2	2.14	0.46
3:I:712:SER:OG	3:I:714:VAL:HG22	2.15	0.46
3:I:1103:VAL:CG2	3:I:1104:PRO:HD3	2.45	0.46
4:J:84:ILE:O	4:J:84:ILE:HG13	2.14	0.46
4:J:735:ALA:O	4:J:738:ARG:HB3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:915:ILE:HA	4:J:918:ILE:HG12	1.97	0.46
4:J:1141:VAL:HG13	4:J:1237:VAL:CG2	2.45	0.46
4:J:1172:LYS:HD3	4:J:1189:MET:CB	2.39	0.46
4:J:1261:LEU:HD13	4:J:1304:ARG:NH1	2.30	0.46
6:L:143:TYR:HB3	6:L:269:LEU:HD21	1.98	0.46
6:L:326:TRP:HA	6:L:329:LYS:CD	2.44	0.46
6:L:470:MET:CE	6:L:486:ARG:HB2	2.45	0.46
6:L:547:VAL:HG23	6:L:548:LEU:HD12	1.96	0.46
6:L:593:LYS:HA	6:L:596:ARG:CD	2.45	0.46
7:O:28:DG:H2"	7:O:29:DA:H8	1.79	0.46
2:G:158:ARG:NH1	2:G:158:ARG:O	2.39	0.46
2:H:120:ASP:OD1	2:H:120:ASP:N	2.47	0.46
3:I:18:ARG:HG2	3:I:1188:ASP:OD1	2.15	0.46
3:I:289:VAL:CG1	3:I:322:LEU:HD23	2.45	0.46
3:I:590:PRO:HB2	3:I:655:VAL:HG21	1.96	0.46
3:I:633:LEU:HD12	3:I:633:LEU:HA	1.73	0.46
4:J:783:LEU:HA	4:J:786:THR:CG2	2.45	0.46
4:J:836:ARG:HA	4:J:869:CYS:SG	2.55	0.46
4:J:1032:SER:CB	4:J:1116:SER:HA	2.45	0.46
4:J:1078:LEU:HD11	4:J:1107:VAL:HG11	1.97	0.46
4:J:1089:LEU:CB	4:J:1096:PRO:HA	2.45	0.46
4:J:1238:GLN:HG2	4:J:1253:ILE:HD12	1.97	0.46
4:J:1314:LEU:HD12	4:J:1315:ALA:N	2.31	0.46
5:K:26:ARG:HH11	5:K:29:GLN:HB2	1.80	0.46
2:G:110:VAL:O	2:G:130:ILE:HB	2.15	0.46
3:I:67:GLU:HB3	3:I:103:VAL:CG2	2.46	0.46
3:I:178:PRO:HB3	3:I:397:LEU:HD11	1.98	0.46
3:I:339:ASN:N	3:I:343:HIS:O	2.47	0.46
3:I:388:LEU:HG	3:I:389:PHE:CD2	2.50	0.46
3:I:444:ASP:N	3:I:444:ASP:OD1	2.47	0.46
3:I:471:VAL:O	3:I:475:VAL:HG23	2.15	0.46
3:I:685:MET:HE2	3:I:1071:GLY:HA2	1.98	0.46
3:I:1268:GLN:HG3	4:J:467:ALA:HB1	1.97	0.46
3:I:1283:ALA:HB1	3:I:1286:THR:HB	1.97	0.46
4:J:782:GLY:O	4:J:786:THR:HG22	2.16	0.46
4:J:1160:SER:OG	4:J:1206:ARG:N	2.30	0.46
3:I:9:LYS:HD3	3:I:791:LEU:CD2	2.46	0.46
3:I:230:PHE:HB2	3:I:333:ILE:HB	1.97	0.46
3:I:233:ARG:CD	3:I:238:GLN:HB2	2.37	0.46
3:I:524:ILE:O	3:I:528:ARG:HD3	2.16	0.46
3:I:1111:GLN:O	3:I:1115:THR:HG22	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:1133:LYS:HG3	3:I:1134:GLN:N	2.31	0.46
3:I:1282:GLY:HA3	5:K:17:PHE:CE1	2.51	0.46
4:J:1029:THR:O	4:J:1118:GLY:HA2	2.15	0.46
6:L:84:LEU:HD12	6:L:84:LEU:O	2.15	0.46
6:L:143:TYR:OH	6:L:147:GLN:NE2	2.49	0.46
8:P:34:DT:H73	8:P:34:DT:OP1	2.14	0.46
8:P:36:DT:C3'	8:P:37:DG:H5''	2.45	0.46
2:H:103:ASN:HA	2:H:141:SER:HB2	1.97	0.46
3:I:137:VAL:CG2	3:I:142:GLU:HG2	2.45	0.46
3:I:299:LYS:HE2	3:I:300:ASP:O	2.15	0.46
3:I:391:SER:OG	3:I:394:ARG:HB2	2.15	0.46
3:I:557:ARG:HA	3:I:579:ALA:HB2	1.97	0.46
3:I:717:VAL:HG12	3:I:782:VAL:HG12	1.98	0.46
3:I:976:ARG:HD2	3:I:976:ARG:HA	1.64	0.46
3:I:1167:GLU:O	3:I:1171:ARG:NH2	2.49	0.46
3:I:1305:TYR:CE1	4:J:379:PRO:HG3	2.51	0.46
4:J:176:PHE:CZ	4:J:178:ALA:HB3	2.51	0.46
4:J:252:LEU:HG	4:J:262:THR:CG2	2.40	0.46
4:J:641:ILE:HD12	4:J:644:MET:CE	2.46	0.46
4:J:1151:LYS:C	4:J:1153:PRO:HD3	2.36	0.46
6:L:144:LEU:HD21	6:L:221:PHE:CE1	2.50	0.46
6:L:215:GLU:HB3	6:L:218:ARG:NH2	2.31	0.46
6:L:468:ARG:HH12	8:P:35:DA:P	2.38	0.46
6:L:479:THR:HG22	6:L:482:GLU:HB2	1.96	0.46
2:G:11:PRO:O	2:G:12:ARG:HG3	2.16	0.46
3:I:498:ILE:H	3:I:498:ILE:HD12	1.80	0.46
4:J:30:ILE:HG21	4:J:241:VAL:HG12	1.97	0.46
4:J:66:LYS:NZ	4:J:69:GLU:OE2	2.24	0.46
4:J:850:LYS:HA	4:J:877:VAL:CG1	2.45	0.46
4:J:1319:PHE:HD1	4:J:1342:ASP:HB2	1.81	0.46
3:I:898:GLU:CD	6:L:565:ILE:HG12	2.36	0.46
3:I:1325:VAL:HG22	4:J:249:LEU:HD22	1.98	0.46
4:J:103:GLY:C	4:J:244:VAL:HG22	2.36	0.46
4:J:127:LEU:HD21	4:J:234:PRO:HB3	1.98	0.46
4:J:842:ARG:HB3	4:J:882:VAL:HG21	1.97	0.46
4:J:1035:VAL:HG23	4:J:1113:VAL:O	2.15	0.46
6:L:82:GLN:NE2	6:L:85:SER:OG	2.49	0.46
8:P:40:DC:H1'	8:P:41:DT:O5'	2.15	0.46
3:I:95:PRO:HA	3:I:126:GLU:HB3	1.97	0.46
3:I:161:LYS:HD2	3:I:170:VAL:HG21	1.97	0.46
3:I:1088:ASP:OD1	3:I:1088:ASP:N	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:1280:ALA:HB1	4:J:918:ILE:CG2	2.46	0.46
4:J:399:LYS:HE2	4:J:399:LYS:HB3	1.65	0.46
4:J:1002:VAL:O	4:J:1018:ALA:HA	2.15	0.46
4:J:1021:ASP:HB3	4:J:1024:THR:HG23	1.97	0.46
4:J:1023:HIS:HA	4:J:1125:PRO:HA	1.97	0.46
4:J:1026:PRO:CA	4:J:1123:ARG:HA	2.33	0.46
4:J:1266:ILE:HA	4:J:1302:TYR:HA	1.98	0.46
4:J:1311:LYS:HE2	4:J:1314:LEU:HD21	1.97	0.46
6:L:145:LEU:CD1	6:L:225:ARG:HA	2.46	0.46
1:N:72:TYR:HB3	3:I:170:VAL:HG23	1.98	0.46
3:I:178:PRO:HB3	3:I:397:LEU:CD1	2.46	0.46
3:I:344:GLY:HA3	3:I:346:TYR:CE2	2.50	0.46
3:I:818:VAL:CG2	3:I:1076:ILE:HD12	2.46	0.46
3:I:898:GLU:HA	3:I:901:LEU:HB3	1.97	0.46
4:J:38:VAL:CG2	4:J:105:ILE:HG12	2.46	0.46
4:J:370:LYS:HG3	4:J:441:LEU:HD12	1.98	0.46
4:J:530:PRO:O	4:J:533:ALA:HB3	2.16	0.46
4:J:909:ILE:HD12	4:J:910:ASN:H	1.81	0.46
4:J:1162:ILE:HD11	4:J:1201:GLY:O	2.16	0.46
6:L:27:VAL:O	6:L:31:LEU:HG	2.16	0.46
6:L:301:ASN:O	6:L:305:LEU:HB2	2.16	0.46
2:M:252:ILE:HG22	2:M:252:ILE:O	2.16	0.46
2:G:125:LYS:HE3	2:G:128:HIS:HB2	1.98	0.45
3:I:404:LYS:HE3	3:I:450:ASN:HA	1.98	0.45
3:I:564:PRO:HG2	3:I:568:ASN:O	2.15	0.45
3:I:699:LEU:HG	3:I:799:ASN:HD22	1.81	0.45
3:I:968:GLU:HB3	3:I:1018:TYR:OH	2.16	0.45
3:I:982:GLY:O	3:I:1002:LEU:HD11	2.16	0.45
3:I:1191:LYS:N	3:I:1194:GLU:OE1	2.47	0.45
4:J:254:PRO:HB3	4:J:260:PHE:HE2	1.80	0.45
4:J:478:LEU:HD13	5:K:23:ALA:HB3	1.99	0.45
4:J:908:ILE:HG13	4:J:909:ILE:O	2.16	0.45
4:J:1144:LEU:HD11	4:J:1236:GLU:CG	2.34	0.45
4:J:1165:PHE:HA	4:J:1175:LEU:CG	2.46	0.45
4:J:1174:ARG:HG2	4:J:1187:GLU:OE1	2.16	0.45
4:J:1178:THR:HA	4:J:1184:ASP:CB	2.46	0.45
4:J:1181:ASP:N	4:J:1181:ASP:OD1	2.47	0.45
6:L:151:VAL:CG2	6:L:156:ALA:HB3	2.36	0.45
6:L:319:ALA:O	6:L:322:MET:HB2	2.16	0.45
6:L:324:LYS:HB2	6:L:327:SER:HB3	1.98	0.45
7:O:40:DC:H1'	7:O:41:DT:O4'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:P:41:DT:H3'	8:P:41:DT:OP1	2.17	0.45
2:M:304:LYS:HG2	2:M:314:LEU:HD11	1.98	0.45
3:I:104:ILE:O	3:I:115:LYS:N	2.49	0.45
3:I:316:GLU:OE1	3:I:316:GLU:N	2.40	0.45
3:I:435:ILE:HD11	3:I:441:GLU:C	2.36	0.45
3:I:801:ARG:HD2	3:I:1229:TYR:CZ	2.52	0.45
3:I:1119:MET:HG2	3:I:1204:LEU:HD13	1.99	0.45
3:I:1129:ASN:OD1	3:I:1177:ARG:HG3	2.16	0.45
4:J:151:MET:N	4:J:151:MET:SD	2.89	0.45
4:J:582:ILE:HD13	4:J:627:THR:CG2	2.44	0.45
4:J:845:ALA:O	4:J:860:ARG:HD3	2.16	0.45
4:J:872:LEU:HG	4:J:877:VAL:CG2	2.46	0.45
4:J:950:ILE:HD12	4:J:982:LEU:CD2	2.37	0.45
4:J:955:LYS:O	4:J:984:LEU:HD11	2.17	0.45
4:J:1036:ARG:NH2	4:J:1081:VAL:HB	2.31	0.45
4:J:1247:LYS:O	4:J:1248:ILE:HG13	2.16	0.45
6:L:315:TRP:CE3	6:L:316:PHE:HB2	2.51	0.45
6:L:576:VAL:HG11	6:L:587:ILE:HG21	1.98	0.45
2:G:10:LYS:O	2:G:30:PRO:HB2	2.17	0.45
3:I:182:SER:HB3	3:I:199:ASP:OD1	2.16	0.45
3:I:623:LEU:HD12	3:I:627:GLY:HA2	1.99	0.45
3:I:963:GLU:HA	3:I:966:ILE:CG1	2.46	0.45
3:I:1281:TYR:CE2	4:J:431:ARG:HG3	2.52	0.45
3:I:1319:MET:HE3	4:J:1353:VAL:HG13	1.98	0.45
4:J:536:LEU:HD23	4:J:536:LEU:O	2.15	0.45
4:J:1152:GLU:HB3	4:J:1214:PRO:CD	2.45	0.45
6:L:135:ALA:HB1	6:L:253:SER:HB2	1.97	0.45
6:L:399:LEU:HD12	6:L:399:LEU:HA	1.74	0.45
6:L:479:THR:CG2	6:L:482:GLU:HB2	2.47	0.45
2:H:35:PHE:CA	2:H:38:THR:HG22	2.45	0.45
2:H:59:VAL:HG21	2:H:85:LEU:HD12	1.99	0.45
3:I:22:LEU:HD22	3:I:603:ILE:HD13	1.98	0.45
3:I:566:GLY:HA2	4:J:787:ALA:CB	2.46	0.45
3:I:587:LEU:HD23	3:I:587:LEU:HA	1.86	0.45
3:I:641:GLU:OE1	3:I:641:GLU:N	2.49	0.45
3:I:977:ALA:O	3:I:980:VAL:HB	2.16	0.45
3:I:1122:LYS:HG2	3:I:1229:TYR:CZ	2.52	0.45
3:I:1258:PRO:HG2	4:J:346:ARG:CB	2.28	0.45
4:J:549:LYS:HA	4:J:571:ASP:HA	1.99	0.45
4:J:1154:ALA:HB2	4:J:1212:ASP:O	2.17	0.45
4:J:1234:VAL:O	4:J:1238:GLN:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1267:VAL:CG2	4:J:1301:THR:HG22	2.47	0.45
6:L:347:ILE:O	6:L:351:THR:N	2.38	0.45
6:L:547:VAL:O	6:L:551:LEU:HG	2.16	0.45
7:O:34:DA:H2''	7:O:35:DG:C8	2.52	0.45
2:G:71:LYS:CE	2:G:140:ILE:HG22	2.41	0.45
3:I:131:THR:HG22	3:I:132:ASP:N	2.31	0.45
3:I:239:MET:O	3:I:284:LEU:HD12	2.17	0.45
3:I:985:GLU:HB2	3:I:989:LEU:HD22	1.98	0.45
3:I:1131:MET:CE	3:I:1141:LEU:HA	2.46	0.45
3:I:1285:TYR:HE2	5:K:21:LEU:HD13	1.81	0.45
4:J:114:ILE:HB	4:J:304:ASP:OD1	2.16	0.45
4:J:194:LEU:HB3	4:J:228:VAL:CG2	2.46	0.45
4:J:748:ALA:HA	4:J:754:ILE:HA	1.99	0.45
4:J:950:ILE:CD1	4:J:982:LEU:HD13	2.46	0.45
4:J:1046:ILE:CD1	4:J:1059:LEU:HD22	2.46	0.45
4:J:1194:ARG:HG2	4:J:1212:ASP:HB2	1.97	0.45
4:J:1327:GLU:OE2	4:J:1330:ARG:HB2	2.15	0.45
2:M:290:LEU:HD13	2:M:300:LEU:HD13	1.97	0.45
2:G:68:TYR:HE1	2:G:79:LEU:HD11	1.82	0.45
2:G:78:ILE:HD13	2:G:78:ILE:HA	1.83	0.45
2:H:13:LEU:HA	2:H:29:GLU:CD	2.37	0.45
2:H:61:ILE:HG23	2:H:140:ILE:HD11	1.97	0.45
2:H:68:TYR:CZ	2:H:78:ILE:HB	2.52	0.45
3:I:52:ALA:O	3:I:55:SER:HB3	2.16	0.45
3:I:75:LEU:HD12	3:I:94:ALA:HB3	1.98	0.45
3:I:115:LYS:NZ	3:I:485:ASP:OD1	2.49	0.45
3:I:146:VAL:HG23	3:I:511:LEU:CD2	2.44	0.45
3:I:224:PHE:CG	3:I:347:ILE:HG13	2.52	0.45
3:I:667:LEU:CD2	3:I:705:GLU:HG2	2.47	0.45
3:I:1176:LEU:HD22	3:I:1181:PRO:CD	2.44	0.45
3:I:1219:GLU:OE2	4:J:634:ARG:NH1	2.50	0.45
4:J:74:LYS:HE2	4:J:75:TYR:OH	2.15	0.45
4:J:120:LEU:HB2	4:J:121:PRO:CD	2.47	0.45
4:J:844:THR:CG2	4:J:864:LEU:HD21	2.46	0.45
5:K:9:ALA:HB1	5:K:19:LEU:HD13	1.98	0.45
6:L:222:ALA:O	6:L:225:ARG:HB3	2.17	0.45
2:G:23:HIS:HE1	2:G:204:GLU:HG3	1.82	0.45
2:G:61:ILE:HD11	2:G:64:VAL:HG11	1.98	0.45
3:I:195:PHE:HB3	3:I:203:LYS:HG3	1.98	0.45
3:I:237:LEU:CD1	3:I:322:LEU:HD21	2.37	0.45
3:I:254:ASP:O	3:I:256:GLU:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:320:ASP:O	3:I:324:LYS:HG2	2.17	0.45
3:I:559:CYS:CB	3:I:662:SER:HB2	2.47	0.45
3:I:887:VAL:HB	3:I:913:VAL:CG2	2.46	0.45
4:J:474:LEU:HD21	5:K:27:ALA:CB	2.47	0.45
4:J:1266:ILE:HD13	4:J:1275:LEU:O	2.17	0.45
6:L:275:VAL:CG1	6:L:279:ARG:HD2	2.46	0.45
6:L:369:GLU:OE1	6:L:373:ARG:HD3	2.17	0.45
6:L:543:ALA:HB1	6:L:606:VAL:HG21	1.97	0.45
1:N:37:CYS:HB2	1:N:58:CYS:HB3	1.99	0.45
2:H:35:PHE:HA	2:H:38:THR:CG2	2.47	0.45
3:I:26:TYR:CE2	3:I:28:LEU:HB2	2.50	0.45
3:I:40:GLU:HG2	3:I:41:GLN:H	1.81	0.45
3:I:165:HIS:ND1	3:I:165:HIS:O	2.50	0.45
3:I:188:PHE:CE1	3:I:194:LEU:HG	2.51	0.45
3:I:194:LEU:CD1	3:I:346:TYR:HB3	2.46	0.45
3:I:808:ASN:H	4:J:633:ALA:HB2	1.82	0.45
4:J:722:ILE:CG2	4:J:737:ILE:HD12	2.46	0.45
4:J:809:VAL:CG1	4:J:911:LYS:HA	2.47	0.45
4:J:1160:SER:OG	4:J:1206:ARG:HG2	2.17	0.45
7:O:56:DC:H1'	7:O:57:DT:C2	2.52	0.45
3:I:202:ARG:NH1	3:I:368:ARG:HH22	2.14	0.45
3:I:301:TYR:N	3:I:311:CYS:O	2.36	0.45
3:I:466:VAL:O	3:I:469:VAL:HG12	2.17	0.45
3:I:854:ILE:HG23	3:I:855:PRO:HD2	1.98	0.45
3:I:956:ALA:HB1	3:I:1032:LYS:HG2	1.99	0.45
3:I:1151:LEU:HD11	3:I:1198:LEU:CD2	2.47	0.45
3:I:1166:ASP:H	3:I:1168:GLU:N	2.14	0.45
4:J:525:MET:HG3	4:J:527:LEU:CD1	2.47	0.45
4:J:857:LEU:HD21	4:J:871:LEU:CD2	2.47	0.45
4:J:862:THR:O	4:J:864:LEU:HD23	2.15	0.45
4:J:910:ASN:ND2	5:K:15:ASN:HA	2.32	0.45
6:L:426:LYS:HG3	6:L:428:SER:H	1.82	0.45
6:L:573:LEU:HD12	6:L:573:LEU:O	2.17	0.45
2:G:51:MET:HE1	2:G:216:ALA:HA	1.99	0.45
3:I:321:LEU:CA	3:I:324:LYS:HG2	2.35	0.45
3:I:377:THR:HG23	3:I:380:ALA:HB3	1.99	0.45
3:I:580:GLN:HG3	3:I:581:THR:O	2.17	0.45
3:I:828:PHE:CE1	3:I:1066:MET:HE2	2.52	0.45
4:J:895:CYS:SG	4:J:898:CYS:N	2.89	0.45
4:J:913:GLU:OE1	4:J:913:GLU:HA	2.17	0.45
4:J:984:LEU:HD23	4:J:992:LYS:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:1110:GLU:OE2	4:J:1110:GLU:N	2.49	0.45
5:K:8:ASP:O	5:K:11:GLU:HB3	2.16	0.45
5:K:38:LEU:HD11	5:K:67:ARG:NH2	2.25	0.45
5:K:65:ASP:O	5:K:68:GLU:HB2	2.17	0.45
6:L:231:THR:HG21	6:L:249:ILE:CG1	2.40	0.45
6:L:448:ARG:HB2	6:L:450:ILE:O	2.16	0.45
6:L:481:GLU:HG2	6:L:491:GLU:OE2	2.17	0.45
6:L:562:ARG:HD3	6:L:591:GLU:HG3	1.99	0.45
2:H:112:ALA:HB3	2:H:126:PRO:C	2.38	0.44
2:H:213:PRO:HA	2:H:216:ALA:CB	2.41	0.44
3:I:118:LYS:HD3	3:I:487:LEU:O	2.16	0.44
3:I:210:LEU:O	3:I:215:TYR:HB2	2.16	0.44
3:I:227:LYS:NZ	3:I:298:ALA:HB1	2.32	0.44
3:I:887:VAL:HB	3:I:913:VAL:HG22	1.99	0.44
3:I:1105:SER:CB	4:J:731:ARG:HH11	2.30	0.44
4:J:59:ALA:O	4:J:90:VAL:HG23	2.17	0.44
4:J:68:TYR:CE2	4:J:78:LEU:HD13	2.52	0.44
4:J:194:LEU:HD23	4:J:228:VAL:CG2	2.47	0.44
4:J:418:GLU:HB2	5:K:45:LYS:HB2	1.99	0.44
4:J:646:ILE:HD11	4:J:762:ASN:ND2	2.32	0.44
4:J:1226:VAL:HG13	4:J:1227:HIS:CD2	2.52	0.44
7:O:48:DG:H2''	7:O:49:DC:OP1	2.18	0.44
8:P:40:DC:H2''	8:P:41:DT:OP2	2.17	0.44
8:P:51:DC:H2''	8:P:52:DT:H72	1.98	0.44
1:N:37:CYS:HB2	1:N:58:CYS:H	1.82	0.44
2:H:82:LEU:CG	2:H:173:VAL:HG12	2.43	0.44
3:I:221:LEU:HD11	3:I:351:LEU:HD11	1.99	0.44
3:I:839:VAL:HG12	3:I:1049:ILE:HG21	1.99	0.44
3:I:988:LYS:HA	3:I:991:LYS:CG	2.45	0.44
3:I:1319:MET:CE	4:J:1353:VAL:HG13	2.47	0.44
4:J:385:LEU:HD23	4:J:385:LEU:HA	1.82	0.44
4:J:473:THR:O	4:J:476:ALA:HB3	2.17	0.44
4:J:515:ARG:NH2	4:J:718:SER:O	2.50	0.44
4:J:1034:PHE:HB2	4:J:1081:VAL:CG2	2.47	0.44
4:J:1153:PRO:O	4:J:1194:ARG:NH1	2.50	0.44
4:J:1165:PHE:HA	4:J:1175:LEU:HD12	1.98	0.44
4:J:1167:LYS:HG2	4:J:1168:GLU:N	2.33	0.44
6:L:120:ALA:HA	6:L:123:ILE:HD12	1.99	0.44
2:G:38:THR:OG1	2:H:45:ARG:HD3	2.16	0.44
2:H:9:LEU:HD12	2:H:32:GLU:OE2	2.18	0.44
3:I:17:LYS:HG3	3:I:1153:ALA:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:284:LEU:O	3:I:285:ILE:HG23	2.17	0.44
3:I:359:ARG:HD3	3:I:360:LEU:CD1	2.48	0.44
3:I:432:LEU:HD12	3:I:435:ILE:HG22	1.99	0.44
3:I:494:ASN:HA	6:L:472:GLN:NE2	2.29	0.44
3:I:616:ILE:HG22	3:I:617:ALA:O	2.17	0.44
3:I:748:ILE:HD11	3:I:966:ILE:HB	1.99	0.44
4:J:449:LEU:HA	4:J:449:LEU:HD12	1.67	0.44
4:J:800:LEU:O	4:J:803:VAL:HG12	2.17	0.44
6:L:14:THR:HG22	6:L:18:GLU:OE2	2.17	0.44
7:O:33:DA:H2'	7:O:34:DA:OP2	2.17	0.44
8:P:44:DT:H2'	8:P:45:DA:N7	2.32	0.44
8:P:63:DG:H1'	8:P:64:DA:H5'	1.99	0.44
2:H:13:LEU:HD22	2:H:28:LEU:CD1	2.39	0.44
2:H:201:LEU:HD23	2:H:203:ILE:HD11	2.00	0.44
3:I:136:PHE:CE2	3:I:145:ILE:HD13	2.53	0.44
3:I:136:PHE:O	3:I:142:GLU:HA	2.17	0.44
3:I:348:SER:HA	3:I:351:LEU:HD12	2.00	0.44
3:I:681:MET:HB3	3:I:685:MET:HE1	1.99	0.44
3:I:832:HIS:N	3:I:1056:VAL:O	2.43	0.44
3:I:976:ARG:NH2	3:I:989:LEU:HB3	2.32	0.44
3:I:1328:LYS:HD3	3:I:1328:LYS:HA	1.74	0.44
4:J:885:VAL:HG23	4:J:899:TYR:HA	1.99	0.44
4:J:982:LEU:CD2	4:J:995:TYR:HB2	2.48	0.44
7:O:38:DG:H2'	7:O:38:DG:OP2	2.18	0.44
2:M:252:ILE:O	2:M:278:ILE:HG21	2.17	0.44
2:H:24:ALA:CB	2:H:213:PRO:HG2	2.46	0.44
2:H:134:THR:OG1	2:H:135:ASP:N	2.51	0.44
3:I:59:ILE:HD11	3:I:472:GLU:HB2	1.98	0.44
3:I:60:GLN:CA	3:I:67:GLU:HG3	2.48	0.44
3:I:589:THR:HG23	3:I:591:TYR:CE2	2.52	0.44
3:I:742:TYR:CD2	3:I:743:PRO:HD2	2.52	0.44
3:I:839:VAL:HG21	3:I:841:ARG:CZ	2.47	0.44
3:I:871:VAL:HG13	3:I:883:LEU:HA	1.99	0.44
3:I:901:LEU:HA	6:L:563:PHE:CE1	2.53	0.44
3:I:976:ARG:HH12	3:I:990:ASP:HB2	1.81	0.44
4:J:661:VAL:CG1	4:J:682:VAL:HG23	2.45	0.44
4:J:1332:LEU:HD23	4:J:1332:LEU:HA	1.85	0.44
4:J:1365:TYR:O	4:J:1369:ARG:HG2	2.17	0.44
6:L:10:LYS:O	6:L:13:VAL:HG22	2.18	0.44
6:L:13:VAL:HG11	6:L:84:LEU:HD22	2.00	0.44
6:L:385:ARG:HH11	7:O:55:DC:H5'	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:451:ARG:HG2	6:L:452:ILE:N	2.33	0.44
6:L:470:MET:SD	6:L:482:GLU:HG2	2.58	0.44
6:L:590:ILE:O	6:L:594:ALA:N	2.51	0.44
6:L:593:LYS:HA	6:L:596:ARG:CG	2.46	0.44
8:P:45:DA:H2"	8:P:46:DG:OP2	2.16	0.44
2:M:282:VAL:O	2:M:316:MET:N	2.29	0.44
2:M:298:LYS:HD2	2:M:298:LYS:HA	1.79	0.44
3:I:227:LYS:HD3	3:I:227:LYS:HA	1.77	0.44
3:I:521:LEU:CD1	3:I:667:LEU:HD12	2.45	0.44
3:I:1158:LYS:HA	3:I:1158:LYS:HD3	1.57	0.44
4:J:398:LYS:HD3	6:L:532:LEU:HD13	1.99	0.44
4:J:1231:ARG:NH1	4:J:1231:ARG:HB3	2.33	0.44
4:J:1282:TYR:CD2	4:J:1286:LYS:HB2	2.52	0.44
6:L:146:GLU:O	6:L:150:ARG:HG3	2.18	0.44
1:N:24:ARG:HH21	4:J:687:ALA:CB	2.30	0.44
2:H:27:THR:HG23	2:H:27:THR:O	2.18	0.44
3:I:249:GLU:C	3:I:268:ARG:HD3	2.37	0.44
3:I:255:ILE:HB	3:I:263:VAL:N	2.31	0.44
3:I:431:LYS:HA	3:I:434:ASP:OD1	2.17	0.44
3:I:1167:GLU:O	3:I:1168:GLU:HG3	2.18	0.44
3:I:1301:ARG:HG3	3:I:1302:THR:N	2.33	0.44
4:J:58:CYS:SG	4:J:59:ALA:N	2.91	0.44
4:J:429:LEU:HB3	4:J:925:GLU:HB3	2.00	0.44
4:J:502:PRO:HG2	4:J:601:ILE:HD13	2.00	0.44
4:J:559:ALA:HB3	4:J:562:GLU:HB2	2.00	0.44
4:J:876:SER:CB	4:J:990:ARG:HH21	2.31	0.44
4:J:885:VAL:HG13	4:J:894:VAL:CG1	2.48	0.44
4:J:967:VAL:HG13	4:J:971:GLY:O	2.17	0.44
4:J:1053:LEU:HD12	4:J:1054:THR:N	2.32	0.44
4:J:1152:GLU:O	4:J:1214:PRO:HD2	2.17	0.44
4:J:1157:ALA:O	4:J:1206:ARG:HA	2.17	0.44
4:J:1176:VAL:HG22	4:J:1187:GLU:HB2	1.98	0.44
4:J:1261:LEU:O	4:J:1261:LEU:HD12	2.17	0.44
6:L:139:GLU:HA	6:L:142:THR:OG1	2.17	0.44
2:M:282:VAL:HB	2:M:316:MET:CB	2.35	0.44
3:I:39:ILE:HD11	3:I:75:LEU:HG	2.00	0.44
3:I:169:LYS:HD2	3:I:169:LYS:HA	1.68	0.44
3:I:590:PRO:HG3	3:I:605:TYR:CD1	2.53	0.44
4:J:902:ASP:HB3	4:J:1251:LYS:HD3	1.99	0.44
4:J:1075:ARG:HD3	4:J:1075:ARG:HA	1.75	0.44
6:L:51:MET:HB2	6:L:53:ILE:HG13	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:117:ILE:HG23	6:L:421:TYR:CD1	2.53	0.44
7:O:21:DA:H1'	7:O:22:DT:H5'	2.00	0.44
1:N:52:PHE:HB2	1:N:55:VAL:HG22	1.97	0.44
2:H:11:PRO:HG3	2:H:28:LEU:HD21	2.00	0.44
3:I:176:ILE:O	3:I:178:PRO:HD3	2.18	0.44
3:I:566:GLY:HA2	4:J:787:ALA:HB1	2.00	0.44
3:I:812:PHE:CE2	3:I:813:GLU:HG2	2.53	0.44
3:I:897:PRO:HB2	6:L:564:GLY:O	2.17	0.44
3:I:989:LEU:O	3:I:992:LEU:HD23	2.18	0.44
3:I:1038:GLN:HG3	3:I:1039:GLY:O	2.18	0.44
4:J:615:LYS:HB2	4:J:616:PRO:HD3	2.00	0.44
4:J:683:ILE:HD11	4:J:756:GLU:HA	2.00	0.44
4:J:783:LEU:HD23	4:J:783:LEU:O	2.16	0.44
4:J:986:ASP:HB2	4:J:992:LYS:CG	2.46	0.44
4:J:1106:ILE:O	4:J:1122:ALA:HB1	2.18	0.44
6:L:12:LEU:HB3	6:L:30:HIS:CG	2.51	0.44
6:L:133:SER:OG	6:L:365:MET:HB2	2.18	0.44
7:O:21:DA:H5''	2:M:294:ASN:HD21	1.82	0.44
8:P:46:DG:H2''	8:P:47:DC:H6	1.83	0.44
1:N:40:CYS:HB3	3:I:268:ARG:HB3	2.00	0.43
3:I:99:LYS:O	3:I:100:LEU:HD23	2.18	0.43
3:I:741:MET:CE	3:I:746:ALA:HB2	2.48	0.43
3:I:976:ARG:HH12	3:I:990:ASP:CA	2.31	0.43
3:I:1122:LYS:HG2	3:I:1229:TYR:CE1	2.53	0.43
4:J:579:LEU:HD12	4:J:582:ILE:HG12	2.00	0.43
4:J:850:LYS:HA	4:J:877:VAL:HG11	2.00	0.43
4:J:1049:GLN:O	4:J:1058:SER:N	2.39	0.43
4:J:1059:LEU:HD23	4:J:1059:LEU:HA	1.67	0.43
4:J:1239:ASP:HA	4:J:1242:ARG:CB	2.48	0.43
6:L:348:GLU:HG3	6:L:355:ILE:HG12	2.00	0.43
8:P:42:DT:H2''	8:P:43:DT:OP2	2.18	0.43
2:G:39:LEU:HA	2:G:39:LEU:HD23	1.67	0.43
3:I:254:ASP:HB3	3:I:265:LYS:N	2.33	0.43
3:I:469:VAL:HA	3:I:472:GLU:HG2	2.00	0.43
3:I:637:ARG:O	3:I:637:ARG:HG3	2.18	0.43
3:I:838:CYS:O	3:I:1049:ILE:HA	2.18	0.43
3:I:903:ARG:HB3	3:I:908:GLU:O	2.18	0.43
4:J:115:TRP:CE3	4:J:1333:THR:HG22	2.54	0.43
4:J:420:PRO:O	4:J:471:PRO:HD2	2.18	0.43
4:J:749:LYS:HD3	4:J:753:SER:OG	2.18	0.43
4:J:768:ASN:N	4:J:771:GLN:OE1	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:K:13:ILE:HD11	5:K:19:LEU:CA	2.45	0.43
6:L:280:VAL:HA	6:L:347:ILE:CD1	2.48	0.43
6:L:292:VAL:CG1	6:L:299:LYS:HD2	2.48	0.43
6:L:555:GLU:HA	6:L:558:VAL:CG1	2.45	0.43
8:P:63:DG:H4'	8:P:64:DA:OP1	2.17	0.43
2:H:111:THR:HA	2:H:129:VAL:HA	1.99	0.43
2:H:186:ASN:N	2:H:186:ASN:OD1	2.51	0.43
3:I:921:PRO:HD2	3:I:924:VAL:HG23	1.99	0.43
3:I:971:LEU:HD13	3:I:1018:TYR:CD1	2.46	0.43
3:I:972:PHE:CD1	3:I:975:ILE:HD12	2.46	0.43
3:I:979:LEU:O	3:I:984:VAL:HG23	2.18	0.43
3:I:1232:MET:C	3:I:1233:LEU:HD12	2.39	0.43
3:I:1321:GLU:HG3	4:J:99:ARG:HH21	1.82	0.43
4:J:568:SER:OG	4:J:569:LEU:N	2.51	0.43
4:J:800:LEU:HD12	4:J:1256:ILE:HD12	1.99	0.43
4:J:1275:LEU:CB	4:J:1278:GLU:HB2	2.42	0.43
6:L:261:LEU:CD1	6:L:266:PHE:HB2	2.47	0.43
6:L:437:GLN:O	6:L:441:ARG:HB3	2.18	0.43
6:L:437:GLN:HB3	8:P:37:DG:O6	2.18	0.43
6:L:557:LYS:O	6:L:561:MET:HG2	2.18	0.43
8:P:56:DG:C8	8:P:57:DT:H72	2.52	0.43
3:I:70:TYR:OH	3:I:72:SER:HA	2.19	0.43
3:I:444:ASP:O	3:I:447:HIS:HB2	2.17	0.43
3:I:459:MET:SD	3:I:511:LEU:HD13	2.58	0.43
3:I:556:GLY:O	3:I:576:SER:HB3	2.18	0.43
3:I:633:LEU:CG	3:I:644:LEU:HB3	2.48	0.43
3:I:818:VAL:HB	3:I:1076:ILE:CD1	2.48	0.43
3:I:842:ASP:N	3:I:842:ASP:OD1	2.50	0.43
3:I:898:GLU:O	6:L:540:LEU:HD21	2.18	0.43
4:J:129:ASP:CB	4:J:220:ARG:HH22	2.31	0.43
4:J:325:LYS:CE	6:L:508:GLU:HG2	2.48	0.43
4:J:367:GLY:HA3	4:J:448:GLN:HB2	1.98	0.43
6:L:272:SER:O	6:L:276:MET:N	2.51	0.43
6:L:584:ARG:HH12	8:P:57:DT:C7	2.30	0.43
7:O:55:DC:P	7:O:55:DC:H3'	2.59	0.43
1:N:37:CYS:SG	1:N:61:CYS:HB2	2.58	0.43
2:G:211:ILE:CG2	2:G:216:ALA:HB2	2.49	0.43
2:H:26:VAL:HG13	2:H:26:VAL:O	2.18	0.43
3:I:98:VAL:O	3:I:122:VAL:HG12	2.18	0.43
3:I:726:TYR:O	3:I:733:VAL:HG12	2.19	0.43
3:I:941:LYS:CB	3:I:946:LEU:HD21	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:1257:GLN:NE2	4:J:345:LYS:HE2	2.31	0.43
4:J:132:LEU:HD23	4:J:132:LEU:O	2.19	0.43
4:J:252:LEU:O	4:J:252:LEU:HD23	2.18	0.43
4:J:300:GLN:O	4:J:304:ASP:HB2	2.19	0.43
4:J:452:LEU:HG	4:J:625:MET:SD	2.58	0.43
4:J:707:ILE:O	4:J:713:GLU:HA	2.18	0.43
4:J:826:ILE:HG12	4:J:831:VAL:HG13	2.01	0.43
4:J:1106:ILE:HG12	4:J:1125:PRO:HD3	2.01	0.43
6:L:97:PRO:HB2	6:L:402:LEU:HD22	2.00	0.43
2:G:39:LEU:CD2	2:H:228:LEU:HD21	2.48	0.43
2:H:211:ILE:HD11	2:H:215:GLU:CB	2.47	0.43
3:I:142:GLU:CB	3:I:515:MET:CE	2.96	0.43
3:I:233:ARG:HB2	3:I:238:GLN:CG	2.49	0.43
3:I:241:LEU:CD1	3:I:285:ILE:HG12	2.49	0.43
3:I:344:GLY:HA3	3:I:346:TYR:CZ	2.54	0.43
3:I:1166:ASP:N	3:I:1168:GLU:H	2.14	0.43
3:I:1291:LEU:HD21	4:J:1351:VAL:HG13	2.01	0.43
4:J:148:GLU:HB2	4:J:177:ASP:CB	2.49	0.43
4:J:174:ASP:OD1	4:J:175:GLU:HG3	2.19	0.43
4:J:342:LEU:C	4:J:343:LEU:HD23	2.39	0.43
4:J:516:ASP:OD1	4:J:516:ASP:N	2.49	0.43
4:J:885:VAL:CG2	4:J:899:TYR:HA	2.49	0.43
6:L:219:GLU:O	6:L:223:GLU:N	2.51	0.43
8:P:43:DT:H1'	8:P:44:DT:C5'	2.46	0.43
2:M:277:TYR:O	2:M:280:ASP:HB2	2.19	0.43
2:M:293:PRO:O	2:M:294:ASN:HB2	2.19	0.43
2:G:100:LEU:HD22	2:G:121:VAL:HG11	2.01	0.43
3:I:201:ARG:HD2	3:I:370:MET:SD	2.58	0.43
3:I:660:VAL:O	3:I:660:VAL:HG22	2.19	0.43
3:I:693:LEU:HD22	3:I:829:THR:HB	2.01	0.43
3:I:759:SER:HB3	3:I:765:ILE:HG12	2.00	0.43
3:I:842:ASP:CB	3:I:847:PRO:HA	2.48	0.43
3:I:866:ASP:OD2	3:I:944:ARG:NH1	2.52	0.43
3:I:963:GLU:O	3:I:966:ILE:HG13	2.19	0.43
3:I:965:GLN:HA	3:I:968:GLU:CG	2.48	0.43
3:I:1079:ILE:HG23	3:I:1079:ILE:O	2.18	0.43
4:J:44:ILE:HD11	4:J:252:LEU:HD22	2.00	0.43
4:J:490:ILE:HG13	4:J:491:LEU:CD2	2.49	0.43
4:J:949:SER:HA	4:J:1020:TRP:CH2	2.53	0.43
4:J:1027:VAL:HG22	4:J:1027:VAL:O	2.18	0.43
6:L:11:LEU:HD12	6:L:11:LEU:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:315:TRP:CH2	6:L:341:LEU:HD11	2.54	0.43
6:L:387:VAL:HG23	6:L:435:ILE:HG21	2.00	0.43
6:L:491:GLU:HA	6:L:494:ILE:HB	2.01	0.43
7:O:21:DA:H2''	7:O:22:DT:C6	2.53	0.43
7:O:34:DA:H4'	7:O:35:DG:OP1	2.19	0.43
8:P:36:DT:C2'	8:P:37:DG:H5''	2.48	0.43
1:N:5:ALA:HB3	3:I:678:ARG:NH2	2.34	0.43
2:G:100:LEU:HD21	2:G:121:VAL:HG21	2.00	0.43
2:H:85:LEU:HD21	2:H:130:ILE:HG23	1.99	0.43
3:I:97:ARG:HA	3:I:97:ARG:HD3	1.87	0.43
3:I:173:ASN:HA	3:I:187:GLU:HA	2.00	0.43
3:I:499:SER:O	3:I:502:VAL:HG12	2.18	0.43
3:I:590:PRO:HB2	3:I:655:VAL:HG22	2.00	0.43
3:I:817:LEU:HD11	3:I:1080:ASN:ND2	2.33	0.43
3:I:1240:ASP:OD1	3:I:1240:ASP:N	2.43	0.43
3:I:1246:ARG:NH2	3:I:1249:GLY:H	2.16	0.43
4:J:70:CYS:SG	4:J:74:LYS:N	2.92	0.43
4:J:103:GLY:CA	4:J:244:VAL:HG22	2.48	0.43
4:J:350:SER:HB2	4:J:469:HIS:ND1	2.34	0.43
4:J:357:VAL:HG22	4:J:461:PHE:CZ	2.54	0.43
4:J:644:MET:O	4:J:764:ARG:HD2	2.19	0.43
4:J:849:LEU:HD13	4:J:855:ASP:C	2.39	0.43
4:J:1350:ASN:ND2	4:J:1358:PRO:HD3	2.33	0.43
6:L:408:GLY:CA	6:L:439:ILE:HD11	2.48	0.43
3:I:342:ASP:O	3:I:344:GLY:N	2.52	0.43
3:I:387:ASN:CB	3:I:391:SER:HB3	2.49	0.43
3:I:417:SER:OG	3:I:418:GLY:N	2.52	0.43
3:I:714:VAL:HG23	3:I:715:THR:H	1.83	0.43
3:I:797:GLY:N	3:I:1231:TYR:OH	2.52	0.43
3:I:864:LYS:HD2	3:I:875:ALA:CB	2.43	0.43
3:I:887:VAL:CG2	3:I:913:VAL:HG21	2.48	0.43
4:J:51:PRO:HB3	4:J:57:PHE:O	2.19	0.43
4:J:162:GLU:OE1	4:J:162:GLU:HA	2.18	0.43
4:J:371:LYS:HE2	4:J:371:LYS:HB2	1.80	0.43
4:J:527:LEU:HD23	4:J:533:ALA:CB	2.49	0.43
4:J:647:PRO:HG3	4:J:697:MET:HA	2.00	0.43
4:J:759:ILE:HG23	4:J:771:GLN:HB3	2.00	0.43
4:J:826:ILE:CD1	4:J:831:VAL:HG22	2.49	0.43
4:J:964:LYS:CB	4:J:977:SER:HB3	2.31	0.43
4:J:1077:ALA:HB2	4:J:1100:PHE:CD1	2.53	0.43
4:J:1256:ILE:O	4:J:1260:MET:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:L:147:GLN:NE2	6:L:265:GLN:HE22	2.17	0.43
6:L:277:MET:HG2	6:L:362:ASN:HD21	1.84	0.43
6:L:335:GLU:O	6:L:339:ARG:HG3	2.18	0.43
6:L:339:ARG:O	6:L:343:LYS:HD2	2.19	0.43
6:L:588:ARG:HD2	8:P:57:DT:H73	2.01	0.43
3:I:137:VAL:HG22	3:I:142:GLU:HG2	2.00	0.43
3:I:453:ILE:CD1	3:I:587:LEU:HG	2.49	0.43
3:I:1149:TYR:OH	3:I:1176:LEU:HD11	2.18	0.43
4:J:536:LEU:HD22	4:J:542:ALA:CB	2.49	0.43
4:J:745:GLY:C	4:J:746:LEU:HD12	2.40	0.43
4:J:965:SER:OG	4:J:975:ILE:HA	2.19	0.43
4:J:1005:LYS:HB2	4:J:1017:VAL:HG13	2.01	0.43
7:O:29:DA:H2''	7:O:30:DC:H5'	2.00	0.43
2:M:281:LEU:HD23	2:M:307:LEU:HD21	2.01	0.43
3:I:73:TYR:CD2	3:I:96:LEU:HD11	2.54	0.42
3:I:158:ASP:HB3	3:I:173:ASN:OD1	2.19	0.42
3:I:714:VAL:HB	3:I:787:PRO:HD2	2.01	0.42
3:I:935:THR:HG22	3:I:936:ARG:O	2.19	0.42
3:I:964:LEU:HA	3:I:967:LEU:HD21	2.01	0.42
4:J:364:HIS:HB3	4:J:487:THR:CG2	2.44	0.42
4:J:911:LYS:HE2	4:J:911:LYS:HB3	1.83	0.42
4:J:1155:ILE:HD12	4:J:1155:ILE:H	1.84	0.42
6:L:583:THR:HG22	6:L:586:ARG:H	1.83	0.42
7:O:46:DG:H2''	7:O:47:DG:H8	1.84	0.42
2:G:45:ARG:HH22	3:I:1216:ARG:HA	1.84	0.42
2:H:13:LEU:HA	2:H:29:GLU:OE2	2.19	0.42
3:I:81:ASP:N	3:I:81:ASP:OD1	2.46	0.42
3:I:194:LEU:HD11	3:I:346:TYR:HB3	2.02	0.42
4:J:138:VAL:O	4:J:181:GLY:HA2	2.19	0.42
4:J:268:LEU:HD23	4:J:271:ARG:NH2	2.34	0.42
4:J:842:ARG:CB	4:J:882:VAL:HG21	2.49	0.42
6:L:334:SER:O	6:L:338:HIS:HB2	2.19	0.42
6:L:373:ARG:HB3	6:L:377:LYS:HZ3	1.83	0.42
2:H:222:THR:HA	2:H:225:ALA:HB3	2.01	0.42
3:I:11:ILE:HG23	3:I:11:ILE:O	2.19	0.42
3:I:111:GLU:H	3:I:111:GLU:HG3	1.67	0.42
3:I:164:THR:HB	3:I:171:LEU:HD11	2.00	0.42
3:I:210:LEU:HA	3:I:213:LEU:HB2	2.00	0.42
3:I:210:LEU:HD23	3:I:213:LEU:HD12	2.00	0.42
3:I:432:LEU:O	3:I:435:ILE:HG22	2.18	0.42
3:I:1332:SER:OG	4:J:327:LEU:HD11	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:71:LEU:HA	4:J:71:LEU:HD12	1.74	0.42
4:J:950:ILE:HG12	4:J:1018:ALA:CB	2.41	0.42
6:L:128:ASN:HA	6:L:131:GLN:CD	2.40	0.42
6:L:297:MET:HE2	6:L:302:PHE:N	2.33	0.42
6:L:351:THR:HG21	6:L:358:VAL:HG21	2.01	0.42
6:L:376:LYS:HE3	6:L:376:LYS:HB2	1.81	0.42
6:L:419:PHE:HB2	6:L:430:TYR:CD2	2.54	0.42
6:L:496:LYS:O	6:L:500:ILE:HG12	2.20	0.42
8:P:44:DT:H2''	8:P:45:DA:C8	2.53	0.42
2:G:70:THR:OG1	3:I:729:ALA:HB3	2.19	0.42
2:H:76:GLU:HG3	2:H:80:GLU:HG2	2.01	0.42
2:H:129:VAL:HG21	2:H:132:HIS:CE1	2.54	0.42
2:H:219:ARG:O	2:H:223:ILE:HG12	2.19	0.42
3:I:165:HIS:HD2	3:I:190:PRO:HG2	1.85	0.42
3:I:289:VAL:HG13	3:I:322:LEU:HD23	2.00	0.42
3:I:933:VAL:HA	3:I:1050:VAL:HG12	2.01	0.42
4:J:440:VAL:O	4:J:442:ILE:HG12	2.19	0.42
4:J:800:LEU:HD12	4:J:1256:ILE:CD1	2.49	0.42
4:J:868:TRP:O	4:J:872:LEU:HD13	2.20	0.42
4:J:1167:LYS:CE	4:J:1170:LYS:HB2	2.49	0.42
8:P:63:DG:H1'	8:P:64:DA:C8	2.54	0.42
2:G:131:CYS:SG	2:G:140:ILE:HD13	2.60	0.42
2:G:231:PHE:O	2:G:234:LEU:HG	2.19	0.42
3:I:22:LEU:HD12	3:I:23:ASP:N	2.33	0.42
3:I:198:ILE:HG21	3:I:388:LEU:HD21	2.02	0.42
3:I:213:LEU:HD22	3:I:422:LYS:HB3	2.01	0.42
3:I:244:GLU:HA	3:I:274:ILE:HD13	2.00	0.42
3:I:963:GLU:HA	3:I:966:ILE:HG12	2.01	0.42
3:I:1245:ALA:CB	4:J:351:GLY:HA3	2.48	0.42
3:I:1293:VAL:CG2	3:I:1304:MET:HB2	2.50	0.42
4:J:193:ASP:OD1	4:J:195:GLU:N	2.52	0.42
4:J:425:ARG:HH12	4:J:464:ASP:HB3	1.84	0.42
4:J:511:TYR:HE2	4:J:724:MET:HG3	1.84	0.42
4:J:581:MET:HE2	4:J:581:MET:HB3	1.88	0.42
4:J:1291:GLU:O	4:J:1294:ALA:HB3	2.19	0.42
6:L:280:VAL:HA	6:L:347:ILE:HD13	2.01	0.42
6:L:558:VAL:HB	6:L:580:PHE:HE2	1.84	0.42
6:L:571:TYR:HB3	6:L:575:GLU:CG	2.49	0.42
1:N:48:ARG:HA	1:N:51:ILE:HG12	2.01	0.42
2:H:64:VAL:CA	2:H:65:LEU:HB2	2.49	0.42
3:I:103:VAL:HG12	3:I:117:ILE:CG2	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:230:PHE:CE2	3:I:292:ILE:HB	2.54	0.42
3:I:254:ASP:H	3:I:265:LYS:HG2	1.84	0.42
3:I:805:MET:HB2	3:I:805:MET:HE3	1.88	0.42
4:J:72:CYS:SG	4:J:74:LYS:HB2	2.59	0.42
4:J:164:GLN:HA	4:J:167:ASP:OD2	2.20	0.42
4:J:372:MET:O	4:J:376:LEU:HG	2.19	0.42
4:J:986:ASP:HB2	4:J:992:LYS:CD	2.49	0.42
4:J:1062:LEU:HD22	4:J:1066:GLU:OE2	2.20	0.42
4:J:1120:THR:CB	4:J:1123:ARG:HH11	2.32	0.42
4:J:1203:ARG:NH2	4:J:1205:GLU:OE1	2.40	0.42
4:J:1319:PHE:CD1	4:J:1342:ASP:HB2	2.55	0.42
6:L:80:ALA:O	6:L:84:LEU:HD23	2.19	0.42
6:L:127:ILE:HG13	6:L:131:GLN:HE22	1.85	0.42
6:L:339:ARG:HB3	6:L:343:LYS:HZ2	1.82	0.42
6:L:363:ARG:HG2	6:L:367:ILE:CD1	2.49	0.42
6:L:415:ALA:O	6:L:419:PHE:N	2.44	0.42
6:L:427:PHE:CE2	6:L:431:ALA:HB2	2.55	0.42
6:L:586:ARG:HE	7:O:24:DC:H2''	1.84	0.42
7:O:56:DC:H6	7:O:56:DC:H2'	1.66	0.42
2:G:45:ARG:NH2	3:I:1216:ARG:HA	2.34	0.42
2:G:111:THR:O	2:G:114:ASP:HB2	2.20	0.42
2:G:179:PRO:HG3	2:G:211:ILE:HG13	2.00	0.42
3:I:387:ASN:HB3	3:I:391:SER:HB3	2.02	0.42
3:I:750:ILE:O	3:I:750:ILE:HG13	2.20	0.42
3:I:871:VAL:HG21	3:I:928:VAL:HG11	2.02	0.42
3:I:1294:LYS:HB3	4:J:347:VAL:HG13	2.01	0.42
4:J:58:CYS:SG	4:J:60:ARG:N	2.93	0.42
4:J:111:THR:OG1	4:J:300:GLN:HA	2.20	0.42
6:L:133:SER:HB3	6:L:365:MET:HB2	2.00	0.42
6:L:166:VAL:HG22	6:L:260:ARG:CG	2.48	0.42
6:L:325:PRO:O	6:L:328:GLU:HB3	2.19	0.42
6:L:362:ASN:HB2	6:L:365:MET:HE2	2.01	0.42
6:L:426:LYS:HG2	7:O:52:DA:H3'	2.01	0.42
2:M:278:ILE:O	2:M:282:VAL:HG13	2.19	0.42
2:M:290:LEU:HB2	2:M:300:LEU:CD1	2.49	0.42
1:N:44:ILE:O	1:N:44:ILE:HG13	2.20	0.42
1:N:56:THR:C	1:N:57:LEU:HD23	2.40	0.42
2:G:76:GLU:OE2	2:G:132:HIS:N	2.53	0.42
3:I:59:ILE:CG2	3:I:476:LYS:HE2	2.33	0.42
3:I:102:LEU:HD12	3:I:103:VAL:H	1.84	0.42
3:I:180:ARG:O	3:I:396:ASP:N	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:324:LYS:HA	3:I:327:GLN:CD	2.40	0.42
3:I:992:LEU:HD11	3:I:996:ARG:O	2.20	0.42
3:I:1114:GLU:O	3:I:1114:GLU:HG2	2.16	0.42
3:I:1120:ALA:CB	3:I:1198:LEU:HB3	2.39	0.42
4:J:56:LEU:HD12	4:J:56:LEU:N	2.35	0.42
4:J:934:THR:HG23	4:J:934:THR:O	2.19	0.42
6:L:277:MET:CG	6:L:362:ASN:HD21	2.33	0.42
6:L:361:ILE:HA	6:L:364:ARG:HH21	1.81	0.42
6:L:477:GLU:HG2	6:L:478:PRO:N	2.34	0.42
1:N:3:ASP:O	1:N:6:ASP:N	2.51	0.42
1:N:15:LEU:HD11	4:J:750:PRO:O	2.19	0.42
2:G:27:THR:C	2:G:28:LEU:HD12	2.41	0.42
2:H:203:ILE:HG13	2:H:203:ILE:H	1.54	0.42
3:I:95:PRO:HA	3:I:126:GLU:CB	2.50	0.42
3:I:149:LEU:HD12	3:I:452:ARG:O	2.20	0.42
3:I:367:TYR:HD2	3:I:381:ALA:HA	1.82	0.42
3:I:971:LEU:O	3:I:975:ILE:HG13	2.20	0.42
3:I:975:ILE:HD13	3:I:998:LEU:CG	2.49	0.42
3:I:1109:ILE:HD11	4:J:740:LEU:CD1	2.46	0.42
3:I:1131:MET:CA	3:I:1136:GLN:HG2	2.44	0.42
3:I:1165:SER:HG	3:I:1169:VAL:HG13	1.84	0.42
3:I:1172:LEU:O	3:I:1172:LEU:HD23	2.19	0.42
4:J:1039:ASP:OD1	4:J:1074:LEU:HD13	2.19	0.42
4:J:1229:VAL:O	4:J:1233:ILE:HG12	2.19	0.42
6:L:12:LEU:CD1	6:L:48:ILE:HD12	2.49	0.42
2:H:111:THR:OG1	2:H:112:ALA:N	2.51	0.42
3:I:214:ASN:CG	3:I:359:ARG:HE	2.23	0.42
3:I:985:GLU:OE1	3:I:989:LEU:HD13	2.20	0.42
3:I:1285:TYR:CE1	4:J:1356:LEU:HD11	2.55	0.42
4:J:45:ASN:HB3	4:J:48:THR:O	2.20	0.42
4:J:154:LEU:CD2	4:J:158:GLN:HB3	2.50	0.42
4:J:571:ASP:OD1	4:J:571:ASP:N	2.51	0.42
4:J:813:ASP:HA	4:J:895:CYS:HG	1.83	0.42
4:J:1026:PRO:HB2	4:J:1028:ILE:CG2	2.50	0.42
4:J:1033:GLY:HA2	4:J:1081:VAL:O	2.20	0.42
4:J:1038:THR:HG23	4:J:1079:LYS:HB2	2.02	0.42
4:J:1357:ILE:HG23	4:J:1358:PRO:HD2	2.01	0.42
6:L:136:GLU:CB	6:L:361:ILE:HG12	2.42	0.42
6:L:443:ILE:O	6:L:447:ALA:HB3	2.20	0.42
2:M:260:LEU:HD12	2:M:306:VAL:HG11	2.02	0.42
3:I:58:PRO:CB	3:I:69:GLN:HG2	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:871:VAL:HG23	3:I:928:VAL:HG11	2.02	0.41
3:I:895:LEU:CD1	3:I:900:LYS:HG3	2.48	0.41
3:I:905:ILE:HG22	3:I:906:PHE:CE1	2.54	0.41
3:I:1132:LEU:HD12	3:I:1132:LEU:HA	1.73	0.41
3:I:1287:LEU:HD22	4:J:1357:ILE:HD11	2.02	0.41
4:J:35:PHE:CG	4:J:101:ARG:HD2	2.55	0.41
4:J:199:GLU:O	4:J:202:ARG:HB2	2.20	0.41
4:J:262:THR:HG23	6:L:504:PRO:HB2	2.02	0.41
4:J:954:ASN:O	4:J:1013:GLY:HA2	2.20	0.41
6:L:31:LEU:HD11	6:L:44:ILE:HG21	2.02	0.41
6:L:322:MET:HB3	6:L:324:LYS:HG2	2.01	0.41
6:L:344:LEU:HD23	6:L:344:LEU:HA	1.92	0.41
2:H:192:VAL:CG1	2:H:195:ARG:HB2	2.48	0.41
3:I:215:TYR:HB3	3:I:220:ILE:CD1	2.47	0.41
3:I:328:SER:HG	3:I:330:HIS:CD2	2.38	0.41
3:I:699:LEU:HD22	3:I:699:LEU:HA	1.66	0.41
3:I:815:SER:HB3	3:I:1077:SER:OG	2.19	0.41
4:J:62:PHE:O	4:J:98:ARG:HG2	2.20	0.41
4:J:174:ASP:CG	4:J:175:GLU:HG3	2.41	0.41
4:J:332:LYS:HB3	4:J:1328:THR:HB	2.02	0.41
4:J:416:ILE:HD13	4:J:416:ILE:HA	1.84	0.41
4:J:641:ILE:HD12	4:J:641:ILE:HA	1.96	0.41
4:J:686:TRP:CD2	4:J:758:PRO:HG2	2.55	0.41
4:J:847:ASP:HB3	4:J:856:ILE:HG13	2.01	0.41
6:L:9:LEU:HD22	6:L:31:LEU:CD2	2.50	0.41
6:L:135:ALA:HB1	6:L:253:SER:CB	2.50	0.41
6:L:333:VAL:HG23	6:L:336:GLU:HB3	2.02	0.41
6:L:420:GLU:OE1	6:L:420:GLU:HA	2.20	0.41
6:L:558:VAL:HA	6:L:561:MET:HB2	2.02	0.41
7:O:32:DA:H2"	7:O:33:DA:C8	2.55	0.41
2:M:292:THR:HB	2:M:295:LEU:HB3	2.02	0.41
2:G:20:SER:OG	2:G:21:SER:N	2.53	0.41
2:H:82:LEU:HD21	2:H:171:LEU:HD12	2.03	0.41
3:I:184:LEU:HD12	3:I:185:ASP:N	2.35	0.41
3:I:742:TYR:CG	3:I:743:PRO:HD2	2.55	0.41
3:I:1104:PRO:O	3:I:1107:MET:HG2	2.20	0.41
3:I:1270:PHE:HZ	3:I:1278:LEU:HD12	1.85	0.41
4:J:298:MET:HE1	6:L:402:LEU:C	2.41	0.41
4:J:1030:GLU:CG	4:J:1031:VAL:HG23	2.49	0.41
6:L:511:ILE:HG22	6:L:517:SER:O	2.19	0.41
2:M:304:LYS:O	2:M:307:LEU:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:226:GLU:HG2	2:H:10:LYS:HE3	2.01	0.41
2:H:44:ARG:NH1	4:J:538:ARG:HH11	2.14	0.41
2:H:73:GLY:CA	2:H:134:THR:HG22	2.50	0.41
2:H:153:VAL:HB	2:H:177:TYR:HE2	1.85	0.41
3:I:10:ARG:HD2	3:I:1181:PRO:HG3	2.01	0.41
3:I:755:LYS:CE	3:I:755:LYS:HA	2.47	0.41
3:I:779:ARG:HG3	3:I:780:GLY:H	1.86	0.41
3:I:811:ASN:OD1	3:I:811:ASN:N	2.52	0.41
3:I:871:VAL:HG11	3:I:883:LEU:HA	2.01	0.41
3:I:942:ASP:O	3:I:946:LEU:HG	2.20	0.41
4:J:154:LEU:HD21	4:J:158:GLN:CG	2.51	0.41
4:J:253:VAL:HG21	6:L:523:ILE:CG2	2.49	0.41
4:J:1034:PHE:HB2	4:J:1081:VAL:HG23	2.01	0.41
4:J:1067:ARG:NH2	4:J:1071:GLY:O	2.52	0.41
4:J:1165:PHE:HA	4:J:1175:LEU:CB	2.50	0.41
6:L:585:GLU:HG2	7:O:27:DT:H73	2.01	0.41
2:G:28:LEU:HD13	2:G:201:LEU:HD23	2.02	0.41
2:G:155:ALA:N	2:G:174:ASP:OD1	2.47	0.41
3:I:173:ASN:OD1	3:I:173:ASN:N	2.54	0.41
3:I:221:LEU:HD11	3:I:351:LEU:HD13	2.02	0.41
3:I:351:LEU:HA	3:I:354:ASP:HB2	2.01	0.41
3:I:722:GLY:H	3:I:777:VAL:HG23	1.85	0.41
3:I:870:ILE:CD1	3:I:884:VAL:HG13	2.49	0.41
4:J:140:TYR:HB3	6:L:100:MET:CE	2.51	0.41
4:J:429:LEU:HD13	4:J:429:LEU:HA	1.82	0.41
4:J:601:ILE:HD11	4:J:624:ILE:CD1	2.51	0.41
4:J:851:PRO:HD3	4:J:877:VAL:CG1	2.49	0.41
4:J:1034:PHE:H	4:J:1081:VAL:HG23	1.85	0.41
4:J:1050:THR:HG23	4:J:1050:THR:O	2.20	0.41
4:J:1189:MET:O	4:J:1191:PRO:HD3	2.20	0.41
4:J:1226:VAL:HA	4:J:1229:VAL:HG12	2.02	0.41
4:J:1265:THR:CG2	4:J:1279:GLN:HB3	2.50	0.41
6:L:593:LYS:C	6:L:596:ARG:HG2	2.40	0.41
7:O:23:DC:H2''	7:O:24:DC:H5'	2.01	0.41
2:G:192:VAL:HG22	2:G:193:GLU:N	2.35	0.41
2:H:29:GLU:CB	2:H:30:PRO:HD2	2.51	0.41
2:H:103:ASN:HA	2:H:141:SER:CB	2.50	0.41
3:I:557:ARG:NH2	3:I:611:GLU:OE1	2.46	0.41
3:I:1131:MET:HA	3:I:1136:GLN:CG	2.46	0.41
4:J:114:ILE:HD12	4:J:304:ASP:OD2	2.20	0.41
4:J:141:PHE:CD1	4:J:293:ARG:HG2	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:246:PRO:HD2	4:J:249:LEU:HD12	2.02	0.41
4:J:330:MET:HE2	4:J:330:MET:HB3	1.75	0.41
4:J:332:LYS:O	4:J:336:GLY:HA3	2.20	0.41
4:J:749:LYS:HB3	4:J:750:PRO:CD	2.50	0.41
4:J:1052:GLU:HA	4:J:1055:GLY:N	2.36	0.41
4:J:1163:VAL:HG23	4:J:1177:ILE:CA	2.49	0.41
6:L:296:LYS:O	6:L:298:PRO:HD3	2.21	0.41
7:O:55:DC:H2"	7:O:56:DC:N3	2.36	0.41
1:N:40:CYS:CB	3:I:268:ARG:HB3	2.50	0.41
2:G:160:HIS:H	2:G:162:GLU:HG3	1.86	0.41
3:I:5:TYR:HA	3:I:8:LYS:CE	2.51	0.41
3:I:230:PHE:CB	3:I:333:ILE:HB	2.51	0.41
3:I:839:VAL:HG12	3:I:1049:ILE:CG2	2.50	0.41
3:I:896:THR:OG1	3:I:899:GLU:HB3	2.19	0.41
3:I:899:GLU:OE2	3:I:903:ARG:HG2	2.21	0.41
3:I:1276:TRP:CH2	4:J:798:ARG:HA	2.55	0.41
10:I:1401:1N7:C19	10:I:1401:1N7:C4	2.88	0.41
4:J:282:LEU:HD21	6:L:410:ILE:CD1	2.51	0.41
4:J:353:SER:O	4:J:465:GLN:HB3	2.21	0.41
4:J:1075:ARG:HG3	4:J:1165:PHE:CZ	2.56	0.41
4:J:1209:VAL:O	4:J:1209:VAL:HG23	2.21	0.41
6:L:509:THR:O	6:L:518:HIS:HA	2.20	0.41
6:L:546:ASP:O	6:L:549:ALA:HB3	2.21	0.41
2:G:79:LEU:O	2:G:83:LEU:HD13	2.21	0.41
2:H:70:THR:OG1	2:H:71:LYS:N	2.53	0.41
3:I:395:TYR:OH	3:I:397:LEU:HD11	2.21	0.41
3:I:519:ASN:OD1	3:I:520:PRO:HD2	2.20	0.41
3:I:727:VAL:HG23	3:I:732:ILE:CG1	2.32	0.41
3:I:1131:MET:O	3:I:1136:GLN:HG2	2.21	0.41
4:J:1037:PHE:HD2	4:J:1040:MET:HB2	1.86	0.41
4:J:1198:VAL:HG11	4:J:1204:VAL:HG11	2.03	0.41
6:L:23:THR:CB	6:L:58:GLU:H	2.33	0.41
8:P:41:DT:H2"	8:P:42:DT:OP2	2.21	0.41
2:M:270:LEU:HD22	2:M:275:ILE:HG13	2.03	0.41
2:G:95:LYS:HE3	2:G:120:ASP:OD2	2.20	0.41
2:H:39:LEU:HD23	2:H:39:LEU:HA	1.81	0.41
2:H:179:PRO:O	2:H:207:THR:HB	2.20	0.41
3:I:194:LEU:C	3:I:206:ALA:HB2	2.41	0.41
3:I:592:ARG:N	3:I:653:MET:O	2.47	0.41
3:I:689:ALA:CB	3:I:1233:LEU:HD23	2.39	0.41
3:I:856:ASN:HA	6:L:613:ASP:C	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:932:GLN:O	3:I:1050:VAL:HA	2.21	0.41
3:I:975:ILE:CD1	3:I:998:LEU:HD11	2.50	0.41
3:I:988:LYS:HA	3:I:991:LYS:CD	2.51	0.41
3:I:1223:ARG:HA	3:I:1224:PRO:HD2	1.90	0.41
4:J:84:ILE:HG22	4:J:91:GLU:CB	2.51	0.41
4:J:116:PHE:O	4:J:124:ILE:HG22	2.20	0.41
4:J:162:GLU:HA	4:J:165:TYR:HB3	2.03	0.41
4:J:217:LEU:O	4:J:221:ILE:HG12	2.21	0.41
4:J:225:GLU:O	4:J:229:GLN:HG3	2.21	0.41
4:J:377:PHE:CD2	4:J:416:ILE:HD11	2.56	0.41
4:J:418:GLU:HB2	5:K:45:LYS:HG2	2.01	0.41
4:J:913:GLU:O	4:J:915:ILE:HG23	2.21	0.41
4:J:950:ILE:HD12	4:J:982:LEU:HD13	2.02	0.41
4:J:971:GLY:C	4:J:972:LYS:HE2	2.41	0.41
6:L:234:THR:HG21	6:L:244:THR:HB	2.01	0.41
6:L:275:VAL:HG12	6:L:279:ARG:CD	2.50	0.41
6:L:369:GLU:O	6:L:373:ARG:HG3	2.20	0.41
6:L:376:LYS:HB3	6:L:416:VAL:HG11	2.03	0.41
6:L:586:ARG:HE	7:O:24:DC:H2'	1.86	0.41
7:O:42:DA:H1'	7:O:43:DA:C5'	2.46	0.41
2:M:262:LEU:HB3	2:M:266:SER:OG	2.21	0.41
2:G:50:SER:HB2	2:H:8:PHE:CZ	2.55	0.41
2:H:153:VAL:HG12	2:H:158:ARG:NH1	2.36	0.41
3:I:90:VAL:HG12	3:I:91:THR:N	2.36	0.41
3:I:142:GLU:O	3:I:515:MET:HB3	2.20	0.41
3:I:254:ASP:HA	3:I:264:GLU:O	2.21	0.41
3:I:515:MET:HG2	3:I:517:GLN:HB2	2.03	0.41
3:I:587:LEU:O	3:I:607:SER:HA	2.21	0.41
3:I:936:ARG:HB3	3:I:939:VAL:HG23	2.03	0.41
4:J:416:ILE:HG21	4:J:439:PRO:HB2	2.02	0.41
4:J:1022:PRO:O	4:J:1126:GLN:N	2.53	0.41
4:J:1038:THR:CG2	4:J:1079:LYS:HD3	2.49	0.41
4:J:1144:LEU:HD22	4:J:1237:VAL:HB	2.03	0.41
5:K:53:GLU:CG	5:K:59:ILE:HD12	2.42	0.41
7:O:22:DT:H3	8:P:64:DA:H61	1.69	0.41
2:M:292:THR:HB	2:M:295:LEU:HD13	2.03	0.41
1:N:23:ILE:HG23	4:J:680:ASN:ND2	2.36	0.40
2:H:103:ASN:HA	2:H:140:ILE:O	2.21	0.40
2:H:118:ASP:H	2:H:121:VAL:HB	1.85	0.40
2:H:150:ARG:HD3	2:H:150:ARG:HA	1.89	0.40
3:I:368:ARG:O	3:I:372:PRO:HA	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:I:1007:LYS:O	3:I:1011:LEU:HG	2.22	0.40
3:I:1135:GLN:O	3:I:1135:GLN:HG3	2.21	0.40
4:J:114:ILE:HG23	4:J:115:TRP:CD1	2.55	0.40
4:J:335:GLN:NE2	6:L:516:ASP:O	2.54	0.40
4:J:495:ASN:N	4:J:495:ASN:OD1	2.53	0.40
4:J:804:ALA:HA	4:J:1259:GLN:HG3	2.03	0.40
6:L:274:ARG:HA	6:L:274:ARG:NE	2.36	0.40
6:L:559:LEU:HD12	6:L:559:LEU:HA	1.89	0.40
7:O:18:DC:H2"	7:O:19:DA:C8	2.56	0.40
2:M:262:LEU:HD23	2:M:262:LEU:HA	1.84	0.40
2:G:32:GLU:OE1	2:H:150:ARG:NH1	2.49	0.40
2:H:112:ALA:HB3	2:H:126:PRO:CA	2.45	0.40
3:I:32:LEU:HD23	3:I:32:LEU:HA	1.79	0.40
3:I:56:VAL:HG11	3:I:468:LEU:HB3	2.03	0.40
3:I:98:VAL:HB	3:I:122:VAL:HG12	2.02	0.40
3:I:178:PRO:HG3	3:I:395:TYR:HE1	1.85	0.40
3:I:195:PHE:CB	3:I:203:LYS:HD2	2.52	0.40
3:I:283:LYS:HE3	3:I:283:LYS:HB2	1.89	0.40
3:I:724:VAL:HG11	3:I:772:SER:O	2.21	0.40
3:I:1079:ILE:HD12	3:I:1079:ILE:HA	1.94	0.40
3:I:1326:LEU:HD21	4:J:338:PHE:CZ	2.56	0.40
3:I:1333:LEU:HD23	4:J:327:LEU:HD13	2.02	0.40
4:J:132:LEU:O	4:J:136:GLU:HG3	2.21	0.40
4:J:883:ARG:HG2	4:J:883:ARG:H	1.69	0.40
4:J:926:PRO:HG2	4:J:1248:ILE:CD1	2.48	0.40
4:J:1034:PHE:HE1	4:J:1114:GLN:HG3	1.86	0.40
4:J:1046:ILE:HA	4:J:1062:LEU:CD1	2.48	0.40
5:K:30:MET:SD	5:K:49:ILE:HB	2.61	0.40
6:L:118:ASP:CA	6:L:121:LYS:HE3	2.43	0.40
7:O:46:DG:H2"	7:O:47:DG:C8	2.56	0.40
3:I:582:ASN:HB2	3:I:586:PHE:O	2.21	0.40
3:I:593:LYS:HB2	3:I:604:HIS:CE1	2.57	0.40
3:I:678:ARG:HA	3:I:678:ARG:HD3	1.62	0.40
3:I:818:VAL:HG21	3:I:1076:ILE:HD12	2.03	0.40
3:I:833:ILE:HG23	3:I:1054:LEU:O	2.21	0.40
3:I:965:GLN:HB2	10:I:1401:1N7:H24	2.02	0.40
3:I:1168:GLU:O	3:I:1172:LEU:N	2.40	0.40
3:I:1252:SER:O	3:I:1256:GLN:NE2	2.54	0.40
4:J:45:ASN:O	4:J:47:ARG:N	2.55	0.40
4:J:188:LEU:HD23	4:J:188:LEU:HA	1.95	0.40
4:J:484:MET:HA	4:J:489:ASN:HD21	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:J:591:ILE:HG23	4:J:592:VAL:HG13	2.03	0.40
4:J:870:ASP:O	4:J:873:GLU:HB3	2.22	0.40
4:J:975:ILE:CD1	4:J:1003:LEU:HD21	2.51	0.40
6:L:136:GLU:HB2	6:L:361:ILE:HG23	2.03	0.40
7:O:25:DA:H2'	7:O:26:DT:H5''	2.03	0.40
8:P:50:DT:H6	8:P:50:DT:H2'	1.72	0.40
3:I:185:ASP:HB2	3:I:197:ARG:HG3	2.04	0.40
3:I:759:SER:HB3	3:I:765:ILE:CG1	2.51	0.40
3:I:1021:LEU:O	3:I:1024:GLU:HG3	2.21	0.40
3:I:1191:LYS:O	3:I:1195:ILE:HG13	2.22	0.40
4:J:20:ILE:HD11	4:J:1353:VAL:HG21	2.02	0.40
4:J:1254:GLU:O	4:J:1257:VAL:HB	2.21	0.40
5:K:60:ASN:OD1	5:K:60:ASN:N	2.55	0.40
6:L:135:ALA:HA	6:L:141:ILE:CD1	2.38	0.40
6:L:302:PHE:O	6:L:306:PHE:N	2.39	0.40
6:L:573:LEU:HD11	6:L:587:ILE:HB	2.03	0.40
2:G:31:LEU:HD23	2:G:36:GLY:HA2	2.04	0.40
2:G:47:LEU:O	2:G:180:VAL:HG21	2.21	0.40
2:G:81:ILE:HG12	2:G:131:CYS:HB3	2.04	0.40
2:G:167:PRO:HG2	2:G:170:ARG:NH1	2.37	0.40
3:I:17:LYS:HD2	3:I:17:LYS:N	2.36	0.40
3:I:83:GLN:HA	3:I:86:GLN:OE1	2.21	0.40
3:I:241:LEU:HD13	3:I:285:ILE:HG12	2.04	0.40
3:I:312:ALA:H	3:I:315:MET:HE2	1.86	0.40
3:I:502:VAL:O	3:I:506:PHE:HD1	2.03	0.40
3:I:549:ASP:CG	4:J:750:PRO:HG2	2.42	0.40
3:I:572:ILE:O	3:I:572:ILE:HG22	2.21	0.40
3:I:755:LYS:HA	3:I:755:LYS:HE3	2.04	0.40
3:I:965:GLN:HA	3:I:968:GLU:HG3	2.02	0.40
3:I:1006:GLU:HG2	3:I:1007:LYS:N	2.35	0.40
3:I:1017:GLN:HE21	3:I:1017:GLN:HB2	1.64	0.40
4:J:384:LYS:HD2	4:J:384:LYS:HA	1.81	0.40
4:J:615:LYS:H	4:J:615:LYS:HG3	1.72	0.40
4:J:923:ILE:HD11	4:J:1253:ILE:CA	2.49	0.40
4:J:1037:PHE:CD2	4:J:1040:MET:HG3	2.57	0.40
4:J:1184:ASP:OD1	4:J:1184:ASP:N	2.53	0.40
4:J:1251:LYS:HE2	4:J:1251:LYS:HB3	1.77	0.40
6:L:51:MET:HB2	6:L:53:ILE:CD1	2.52	0.40
6:L:261:LEU:HD11	6:L:266:PHE:HB2	2.03	0.40
6:L:380:VAL:HG23	6:L:412:LEU:HG	2.02	0.40
6:L:555:GLU:CA	6:L:558:VAL:HG12	2.46	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:P:54:DT:H2'	8:P:55:DT:H71	2.03	0.40
2:M:317:ARG:HA	2:M:317:ARG:NE	2.36	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	N	70/72 (97%)	67 (96%)	3 (4%)	0	100	100
2	G	228/329 (69%)	193 (85%)	35 (15%)	0	100	100
2	H	213/329 (65%)	169 (79%)	43 (20%)	1 (0%)	29	67
2	M	71/329 (22%)	68 (96%)	3 (4%)	0	100	100
3	I	1338/1342 (100%)	1156 (86%)	182 (14%)	0	100	100
4	J	1338/1430 (94%)	1187 (89%)	150 (11%)	1 (0%)	51	84
5	K	70/91 (77%)	59 (84%)	11 (16%)	0	100	100
6	L	517/616 (84%)	464 (90%)	53 (10%)	0	100	100
All	All	3845/4538 (85%)	3363 (88%)	480 (12%)	2 (0%)	54	84

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	J	859	PRO
2	H	94	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	N	61/61 (100%)	61 (100%)	0	100	100
2	G	196/286 (68%)	195 (100%)	1 (0%)	88	93
2	H	185/286 (65%)	185 (100%)	0	100	100
2	M	65/286 (23%)	65 (100%)	0	100	100
3	I	1155/1157 (100%)	1151 (100%)	4 (0%)	92	95
4	J	1122/1189 (94%)	1117 (100%)	5 (0%)	91	94
5	K	63/75 (84%)	63 (100%)	0	100	100
6	L	467/543 (86%)	467 (100%)	0	100	100
All	All	3314/3883 (85%)	3304 (100%)	10 (0%)	92	95

All (10) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	G	131	CYS
3	I	422	LYS
3	I	468	LEU
3	I	699	LEU
3	I	1216	ARG
4	J	137	ARG
4	J	304	ASP
4	J	338	PHE
4	J	1237	VAL
4	J	1311	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (37) such sidechains are listed below:

Mol	Chain	Res	Type
1	N	25	GLN
2	G	23	HIS
2	H	84	ASN
2	H	132	HIS
3	I	120	GLN
3	I	387	ASN
3	I	490	GLN
3	I	620	ASN
3	I	766	ASN

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Mol	Chain	Res	Type
3	I	856	ASN
3	I	1017	GLN
3	I	1116	HIS
3	I	1209	GLN
3	I	1299	ASN
4	J	158	GLN
4	J	229	GLN
4	J	294	ASN
4	J	365	GLN
4	J	450	HIS
4	J	465	GLN
4	J	489	ASN
4	J	680	ASN
4	J	1049	GLN
4	J	1108	GLN
5	K	29	GLN
5	K	31	GLN
6	L	82	GLN
6	L	128	ASN
6	L	147	GLN
6	L	246	GLN
6	L	309	ASN
6	L	362	ASN
6	L	409	ASN
6	L	446	GLN
6	L	469	GLN
6	L	472	GLN
6	L	579	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry

Of 8 ligands modelled in this entry, 4 are monoatomic - leaving 4 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
10	1N7	L	701	-	30,30,46	5.04	16 (53%)	47,48,72	2.17	14 (29%)
10	1N7	I	1401	-	30,30,46	4.84	15 (50%)	47,48,72	2.26	16 (34%)
10	1N7	J	1504	-	30,30,46	4.97	14 (46%)	47,48,72	2.11	14 (29%)
10	1N7	N	102	-	30,30,46	4.98	15 (50%)	47,48,72	2.26	16 (34%)

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
10	1N7	L	701	-	-	5/7/72/92	0/4/4/4
10	1N7	I	1401	-	-	0/7/72/92	0/4/4/4
10	1N7	J	1504	-	-	1/7/72/92	0/4/4/4
10	1N7	N	102	-	-	7/7/72/92	0/4/4/4

All (60) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	L	701	1N7	C3-C19	18.02	1.83	1.53
10	J	1504	1N7	C3-C19	17.74	1.83	1.53
10	N	102	1N7	C3-C19	17.63	1.83	1.53
10	I	1401	1N7	C3-C19	17.20	1.82	1.53
10	N	102	1N7	C3-C4	11.90	1.73	1.53
10	J	1504	1N7	C3-C4	11.88	1.73	1.53
10	L	701	1N7	C3-C4	11.81	1.73	1.53
10	I	1401	1N7	C3-C4	11.29	1.72	1.53
10	L	701	1N7	C5-C4	-9.28	1.40	1.54
10	N	102	1N7	C5-C4	-9.01	1.40	1.54
10	J	1504	1N7	C5-C4	-8.79	1.40	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	I	1401	1N7	C5-C4	-8.64	1.41	1.54
10	I	1401	1N7	C2-C19	-7.58	1.42	1.56
10	N	102	1N7	C2-C19	-7.41	1.42	1.56
10	J	1504	1N7	C2-C19	-7.28	1.42	1.56
10	L	701	1N7	C2-C19	-7.19	1.42	1.56
10	I	1401	1N7	C8-C7	5.96	1.70	1.54
10	L	701	1N7	C8-C7	5.95	1.70	1.54
10	N	102	1N7	C8-C7	5.67	1.69	1.54
10	J	1504	1N7	C8-C7	5.47	1.69	1.54
10	J	1504	1N7	C5-C9	4.71	1.63	1.55
10	N	102	1N7	C5-C9	4.27	1.62	1.55
10	L	701	1N7	O4-C4	-4.24	1.36	1.43
10	J	1504	1N7	O4-C4	-4.11	1.36	1.43
10	I	1401	1N7	O4-C4	-4.05	1.36	1.43
10	I	1401	1N7	C5-C9	4.01	1.62	1.55
10	L	701	1N7	C5-C6	-3.99	1.48	1.55
10	N	102	1N7	C18-C6	-3.89	1.46	1.53
10	N	102	1N7	O4-C4	-3.86	1.37	1.43
10	L	701	1N7	C7-C6	3.54	1.61	1.54
10	L	701	1N7	C18-C6	-3.49	1.47	1.53
10	L	701	1N7	C5-C9	3.45	1.61	1.55
10	J	1504	1N7	C2-C15	3.43	1.61	1.55
10	L	701	1N7	C2-C15	3.41	1.60	1.55
10	I	1401	1N7	C5-C6	-3.41	1.49	1.55
10	J	1504	1N7	C14-C15	-3.39	1.48	1.53
10	N	102	1N7	C5-C6	-3.37	1.49	1.55
10	I	1401	1N7	C18-C6	-3.27	1.47	1.53
10	J	1504	1N7	C5-C6	-3.24	1.50	1.55
10	J	1504	1N7	C18-C6	-3.14	1.47	1.53
10	I	1401	1N7	C14-C15	-3.13	1.48	1.53
10	N	102	1N7	C7-C6	3.12	1.60	1.54
10	I	1401	1N7	C7-C6	2.88	1.60	1.54
10	N	102	1N7	C2-C15	2.85	1.60	1.55
10	J	1504	1N7	C7-C6	2.81	1.60	1.54
10	L	701	1N7	C14-C15	-2.78	1.49	1.53
10	N	102	1N7	C10-C5	2.65	1.58	1.54
10	I	1401	1N7	C2-C15	2.61	1.59	1.55
10	N	102	1N7	C14-C13	2.60	1.56	1.51
10	J	1504	1N7	C1-C2	2.57	1.58	1.54
10	L	701	1N7	C14-C13	2.48	1.56	1.51
10	L	701	1N7	C16-C15	2.47	1.57	1.53
10	L	701	1N7	O2-C13	-2.37	1.36	1.43

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	I	1401	1N7	C14-C13	2.34	1.56	1.51
10	N	102	1N7	O2-C13	-2.31	1.36	1.43
10	I	1401	1N7	C1-C2	2.17	1.58	1.54
10	J	1504	1N7	O2-C13	-2.14	1.37	1.43
10	I	1401	1N7	O2-C13	-2.09	1.37	1.43
10	N	102	1N7	C14-C15	-2.06	1.50	1.53
10	L	701	1N7	C10-C5	2.06	1.57	1.54

All (60) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	N	102	1N7	C7-C6-C18	-7.22	108.23	118.33
10	I	1401	1N7	C7-C6-C18	-6.08	109.83	118.33
10	J	1504	1N7	C7-C6-C18	-5.84	110.17	118.33
10	L	701	1N7	C9-C5-C4	-5.50	112.65	117.67
10	L	701	1N7	C7-C6-C18	-5.34	110.86	118.33
10	J	1504	1N7	C9-C5-C6	5.25	105.39	100.09
10	L	701	1N7	C19-C18-C17	-5.19	105.67	111.88
10	I	1401	1N7	C9-C5-C4	-5.01	113.09	117.67
10	J	1504	1N7	C9-C5-C4	-4.67	113.41	117.67
10	N	102	1N7	C9-C5-C4	-4.63	113.44	117.67
10	N	102	1N7	C19-C3-C4	-4.57	108.27	114.30
10	N	102	1N7	C6-C5-C4	4.38	111.48	107.40
10	N	102	1N7	C5-C6-C18	4.08	119.95	114.74
10	I	1401	1N7	C21-C20-C22	-3.98	104.12	110.36
10	I	1401	1N7	C19-C3-C4	-3.96	109.07	114.30
10	L	701	1N7	C16-C15-C14	-3.89	106.72	111.19
10	I	1401	1N7	C9-C5-C6	3.87	104.00	100.09
10	I	1401	1N7	C19-C18-C17	-3.87	107.25	111.88
10	I	1401	1N7	C5-C6-C18	3.82	119.62	114.74
10	I	1401	1N7	C6-C5-C4	3.57	110.73	107.40
10	J	1504	1N7	C5-C6-C18	3.56	119.28	114.74
10	N	102	1N7	C16-C15-C2	-3.50	108.94	112.66
10	J	1504	1N7	C21-C20-C9	-3.48	107.59	112.92
10	L	701	1N7	C21-C20-C9	-3.43	107.67	112.92
10	J	1504	1N7	C1-C12-C13	-3.41	106.09	110.47
10	L	701	1N7	C1-C12-C13	-3.39	106.11	110.47
10	L	701	1N7	C6-C5-C4	3.37	110.54	107.40
10	N	102	1N7	C11-C2-C1	-3.35	102.86	108.26
10	I	1401	1N7	C1-C12-C13	-3.34	106.17	110.47
10	L	701	1N7	C7-C8-C9	-3.15	98.88	105.13
10	N	102	1N7	C21-C20-C22	-3.15	105.43	110.36

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
10	L	701	1N7	C22-C20-C9	3.14	116.78	110.28
10	N	102	1N7	C16-C17-C18	3.13	114.82	111.48
10	J	1504	1N7	C14-C13-C12	-3.11	106.84	110.55
10	L	701	1N7	C21-C20-C22	-3.09	105.51	110.36
10	J	1504	1N7	C8-C9-C20	-3.04	107.44	112.15
10	J	1504	1N7	C19-C18-C17	-3.04	108.24	111.88
10	J	1504	1N7	C2-C19-C18	3.03	115.08	111.82
10	I	1401	1N7	C2-C19-C18	3.03	115.07	111.82
10	N	102	1N7	C19-C18-C17	-2.97	108.32	111.88
10	I	1401	1N7	C16-C15-C14	-2.87	107.89	111.19
10	J	1504	1N7	C16-C15-C14	-2.86	107.90	111.19
10	I	1401	1N7	C8-C7-C6	-2.58	100.02	105.13
10	J	1504	1N7	C3-C19-C18	-2.55	107.14	110.88
10	L	701	1N7	C11-C2-C1	-2.55	104.15	108.26
10	J	1504	1N7	C11-C2-C15	-2.53	106.08	110.36
10	L	701	1N7	C16-C17-C18	-2.45	108.87	111.48
10	I	1401	1N7	C10-C5-C9	-2.41	107.44	111.21
10	I	1401	1N7	C8-C9-C20	-2.39	108.44	112.15
10	N	102	1N7	C3-C4-C5	-2.37	108.81	111.24
10	N	102	1N7	C11-C2-C19	2.36	114.43	111.18
10	N	102	1N7	C21-C20-C9	-2.30	109.40	112.92
10	L	701	1N7	C11-C2-C19	2.28	114.32	111.18
10	J	1504	1N7	C15-C14-C13	-2.25	109.45	112.76
10	N	102	1N7	C10-C5-C4	-2.24	106.78	109.07
10	I	1401	1N7	C3-C19-C18	-2.20	107.66	110.88
10	N	102	1N7	C10-C5-C6	2.17	114.60	111.21
10	L	701	1N7	O3-C17-C18	2.15	114.23	109.43
10	I	1401	1N7	C16-C17-C18	2.06	113.68	111.48
10	N	102	1N7	C22-C20-C9	2.04	114.49	110.28

There are no chirality outliers.

All (13) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
10	N	102	1N7	C9-C20-C22-C23
10	N	102	1N7	C21-C20-C22-C23
10	L	701	1N7	C22-C20-C9-C5
10	L	701	1N7	C20-C22-C23-C24
10	L	701	1N7	C21-C20-C9-C8
10	L	701	1N7	C21-C20-C9-C5
10	N	102	1N7	C20-C22-C23-C24
10	N	102	1N7	C21-C20-C9-C5

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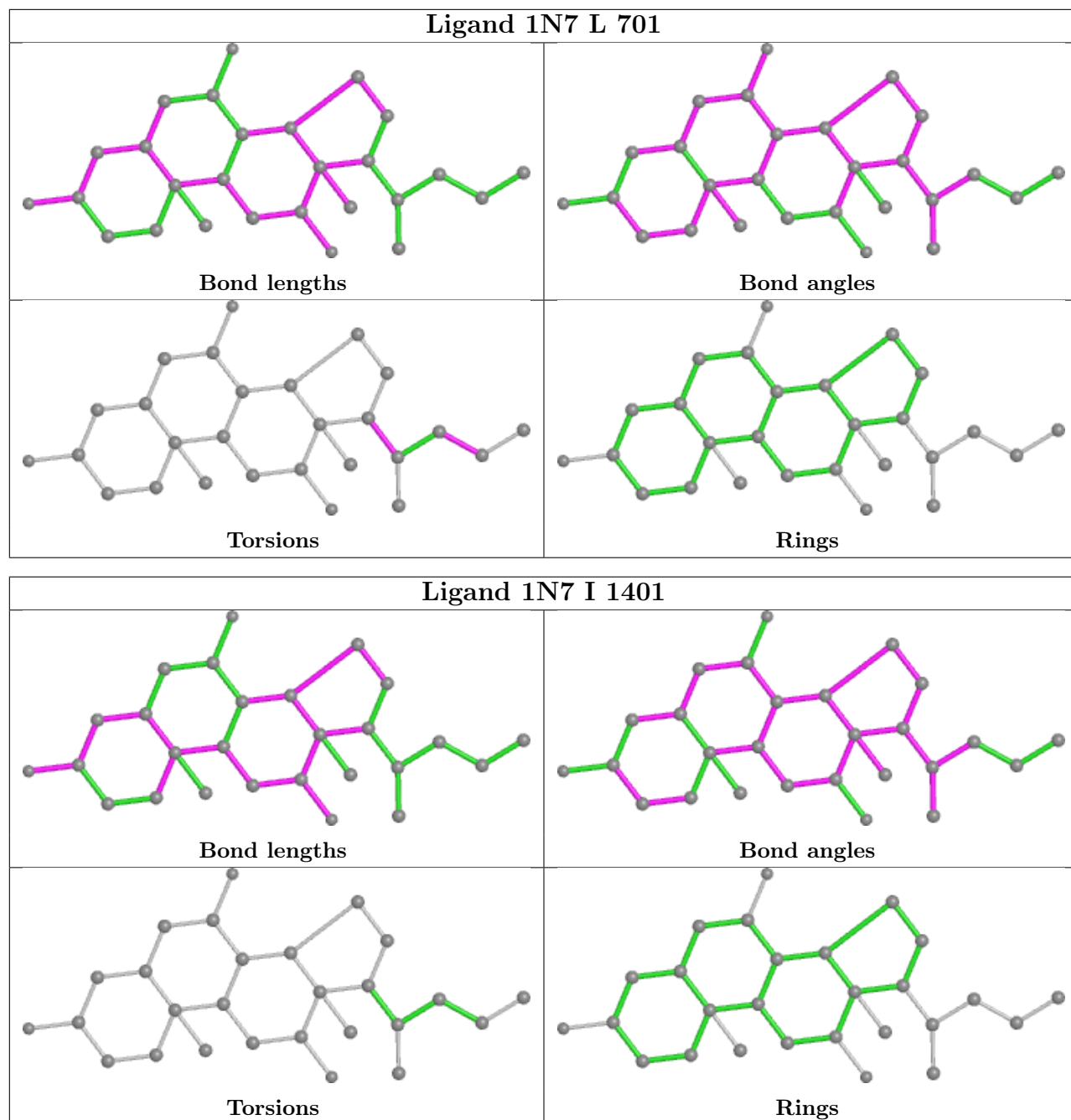
Mol	Chain	Res	Type	Atoms
10	J	1504	1N7	C20-C22-C23-C24
10	L	701	1N7	C22-C20-C9-C8
10	N	102	1N7	C21-C20-C9-C8
10	N	102	1N7	C22-C20-C9-C5
10	N	102	1N7	C22-C20-C9-C8

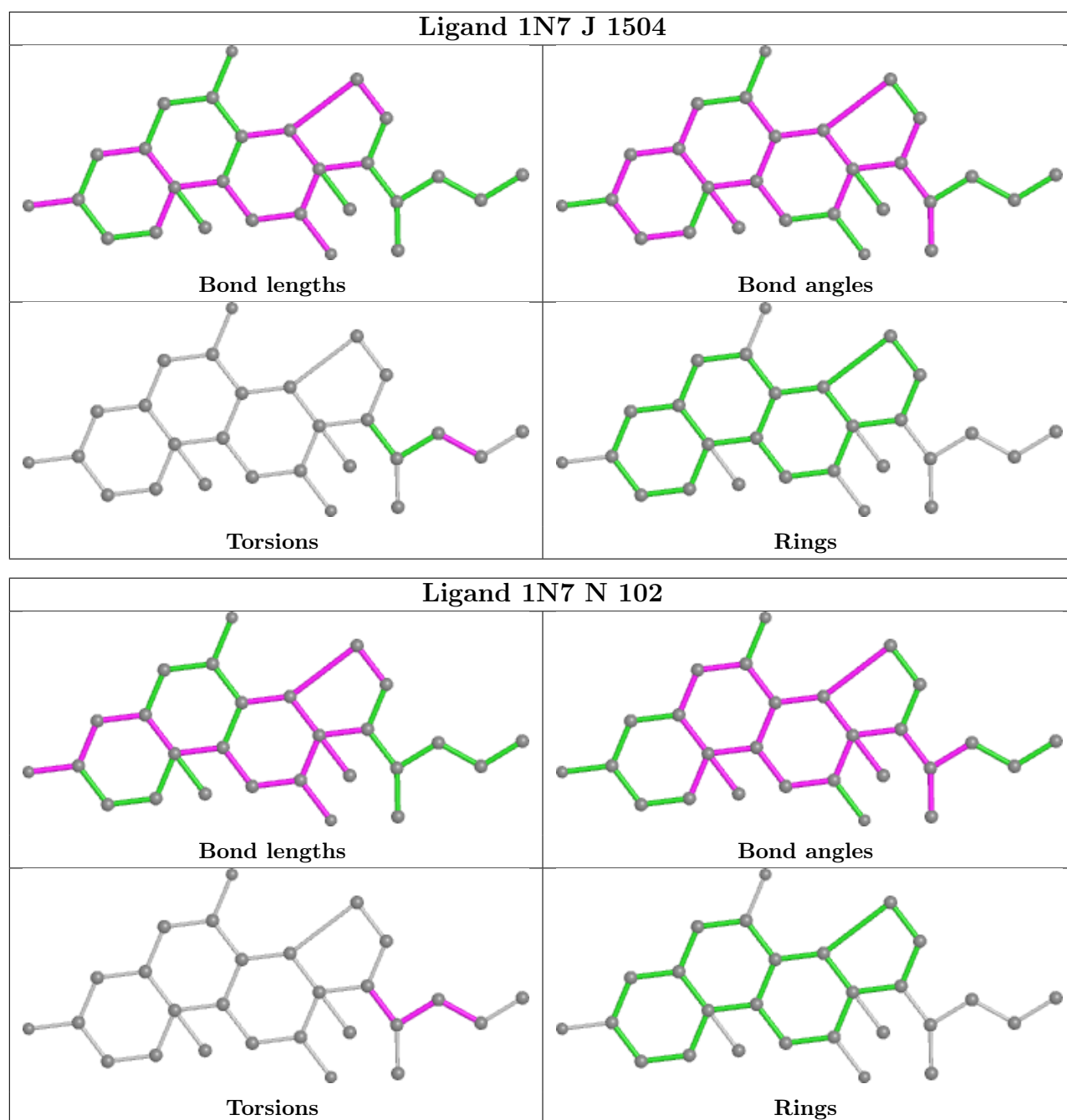
There are no ring outliers.

4 monomers are involved in 18 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
10	L	701	1N7	3	0
10	I	1401	1N7	7	0
10	J	1504	1N7	4	0
10	N	102	1N7	4	0

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





5.7 Other polymers [\(i\)](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [\(i\)](#)

There are no chain breaks in this entry.

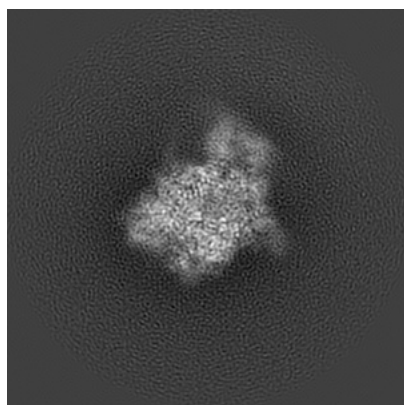
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-20464. These allow visual inspection of the internal detail of the map and identification of artifacts.

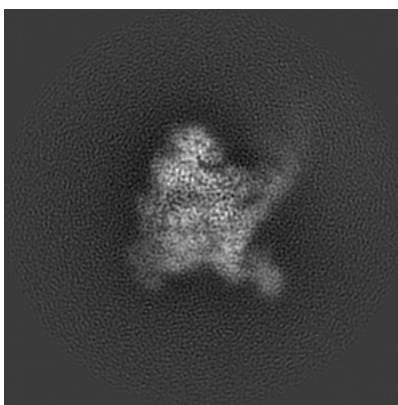
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

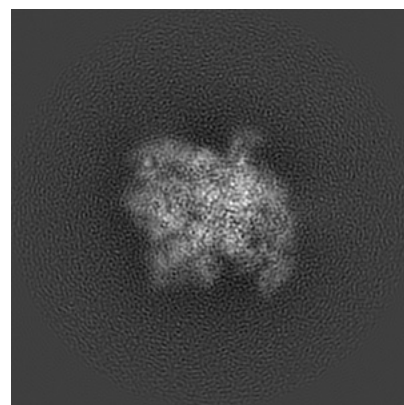
6.1.1 Primary map



X



Y

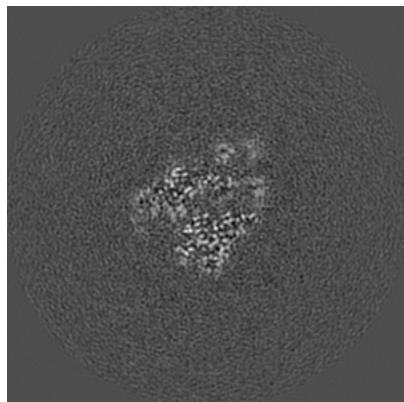


Z

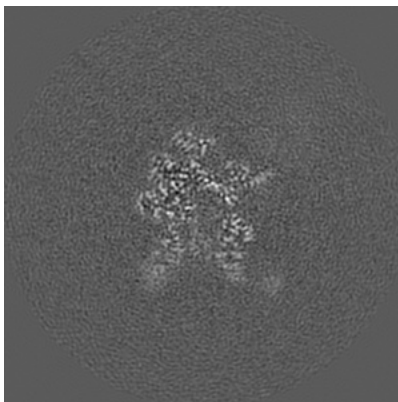
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

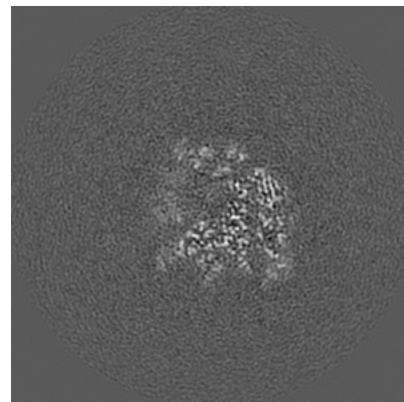
6.2.1 Primary map



X Index: 128



Y Index: 128

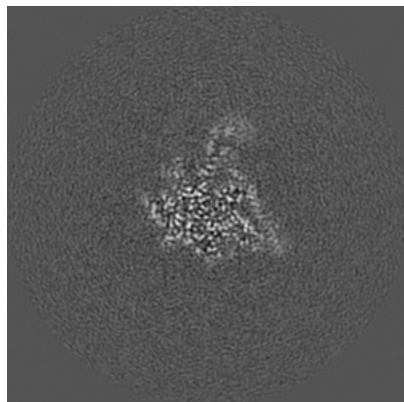


Z Index: 128

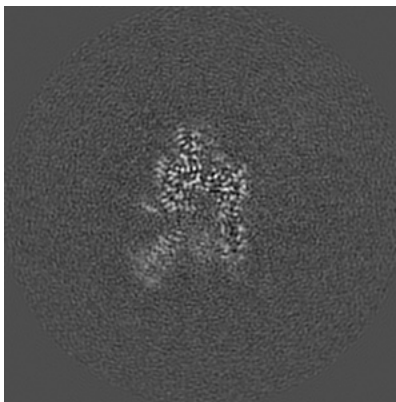
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

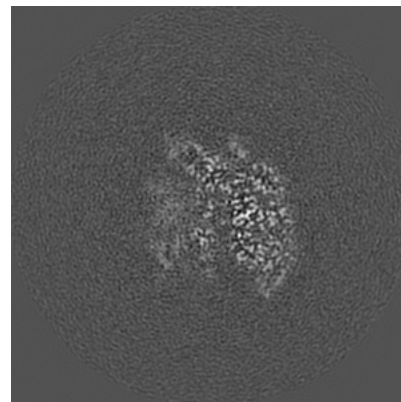
6.3.1 Primary map



X Index: 146



Y Index: 123

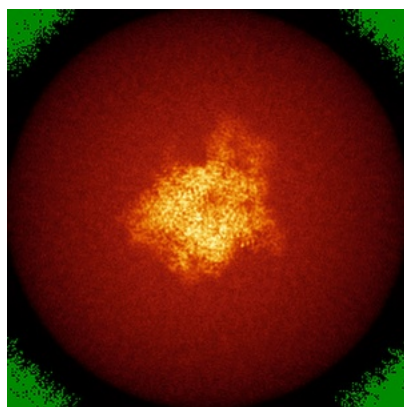


Z Index: 121

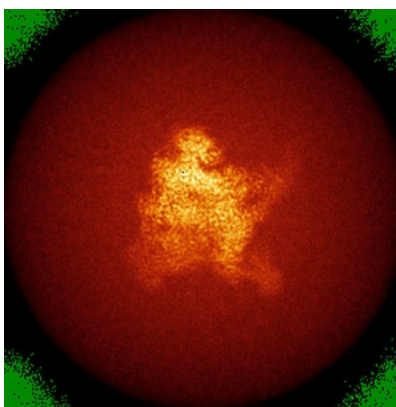
The images above show the largest variance slices of the map in three orthogonal directions.

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

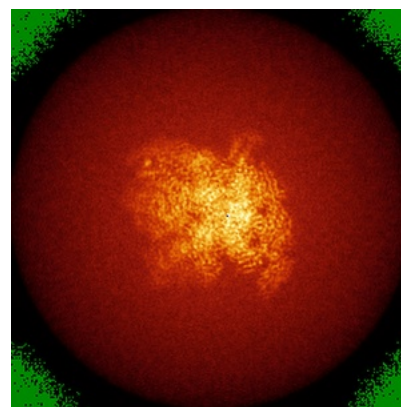
6.4.1 Primary map



X



Y

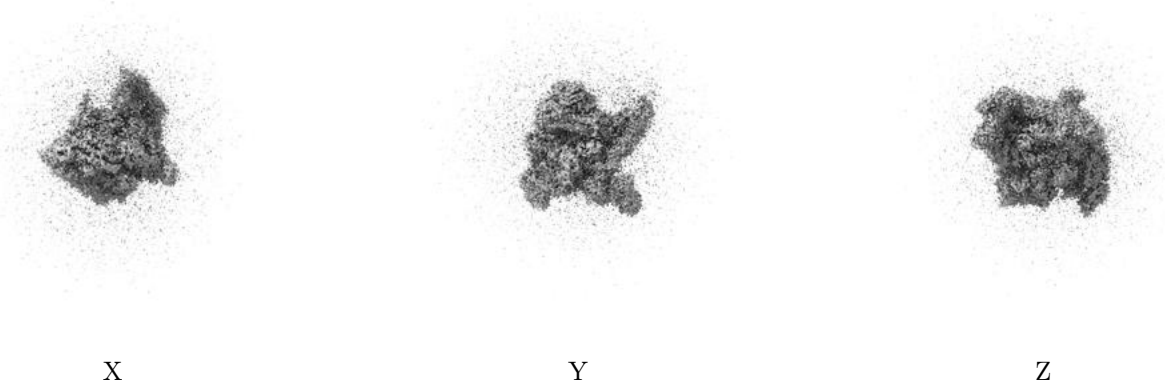


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.02. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

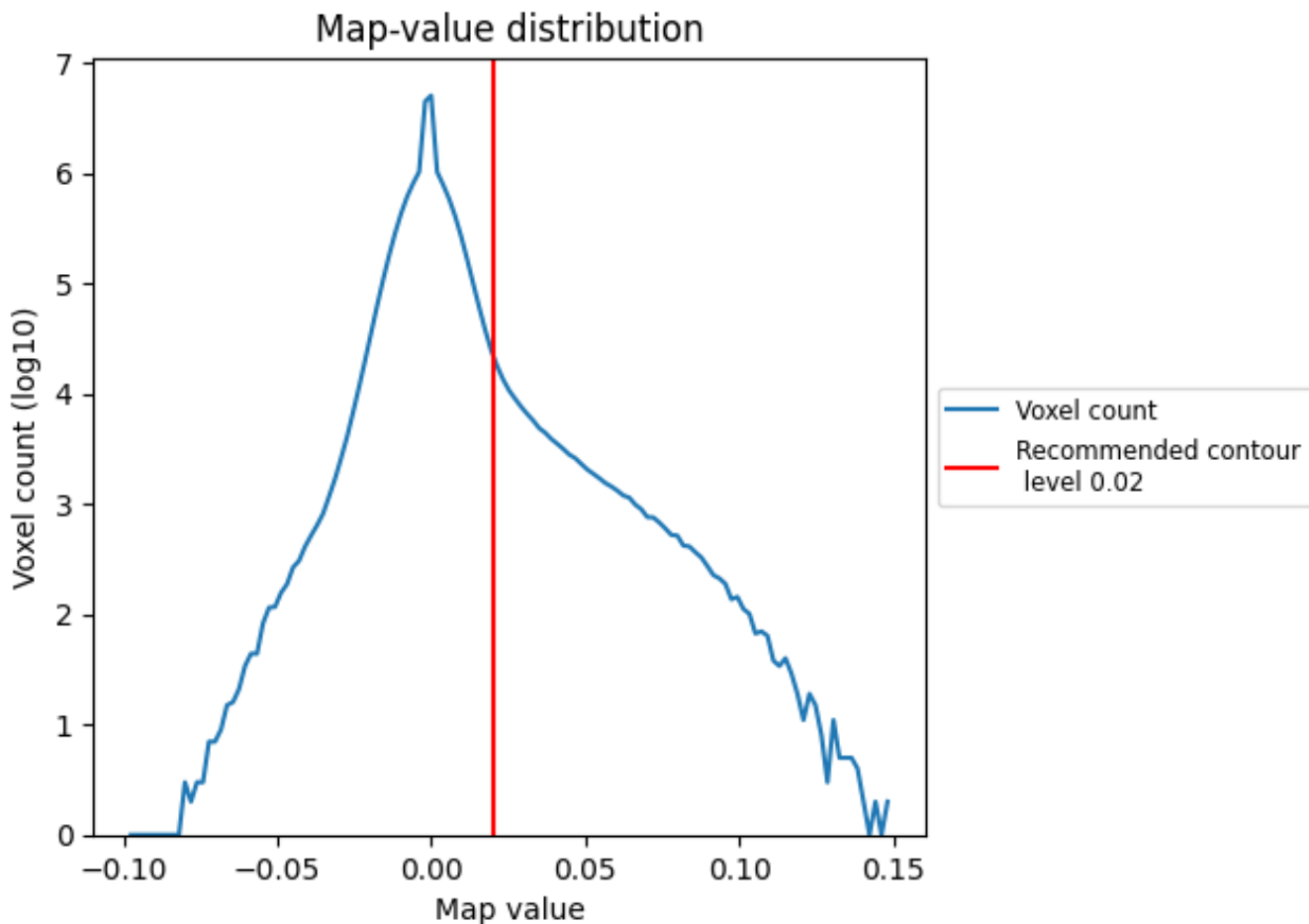
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

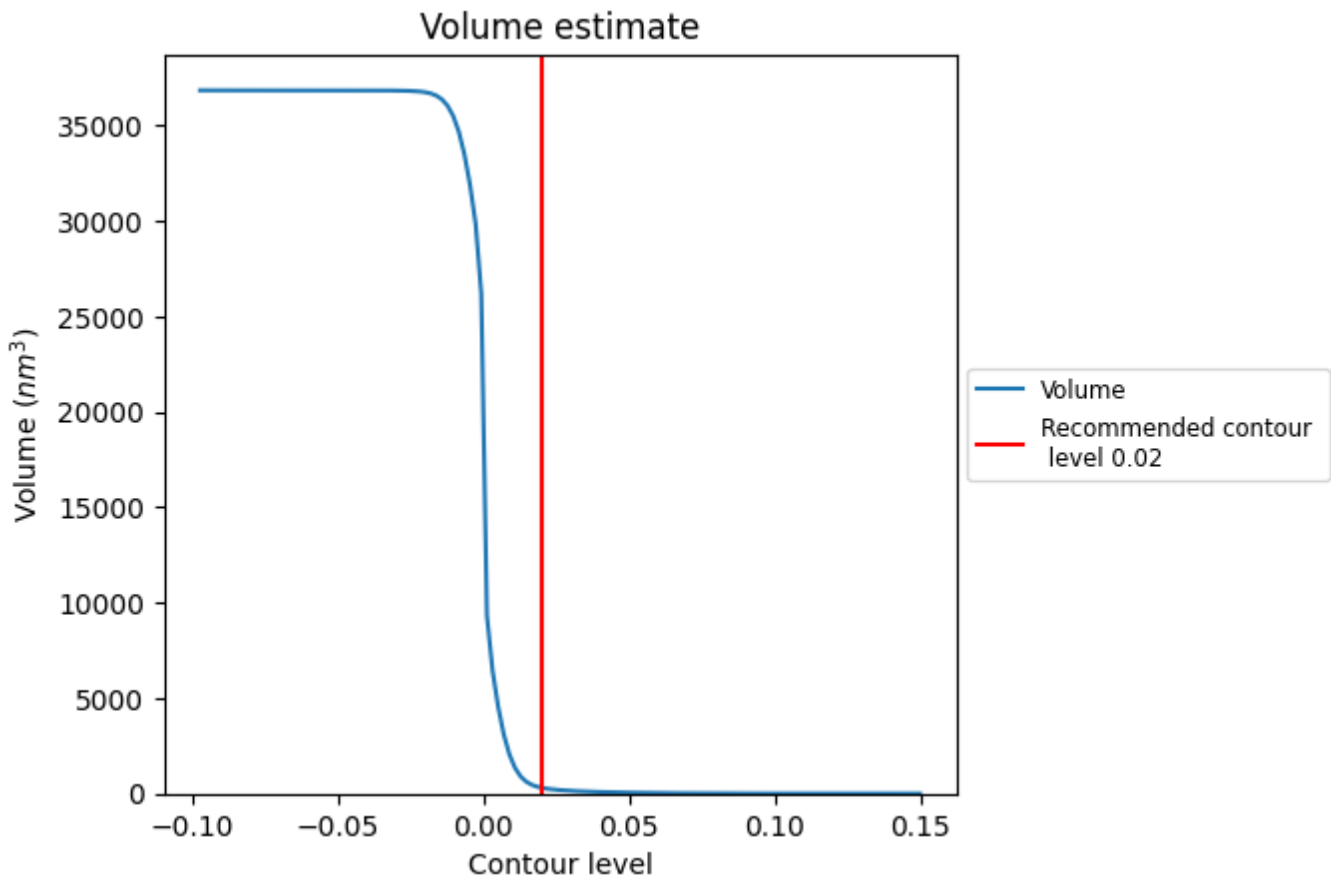
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

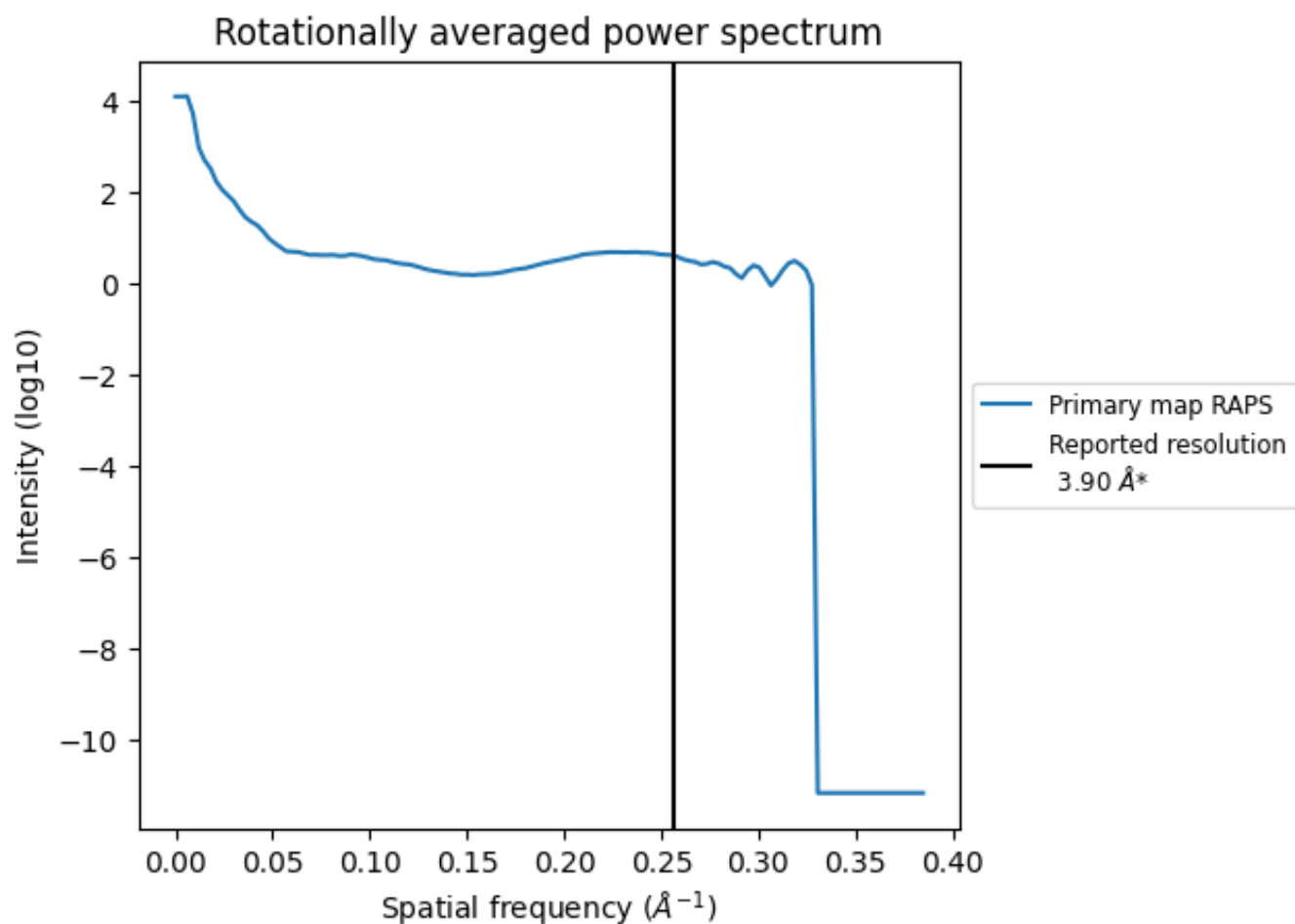
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 302 nm³; this corresponds to an approximate mass of 273 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

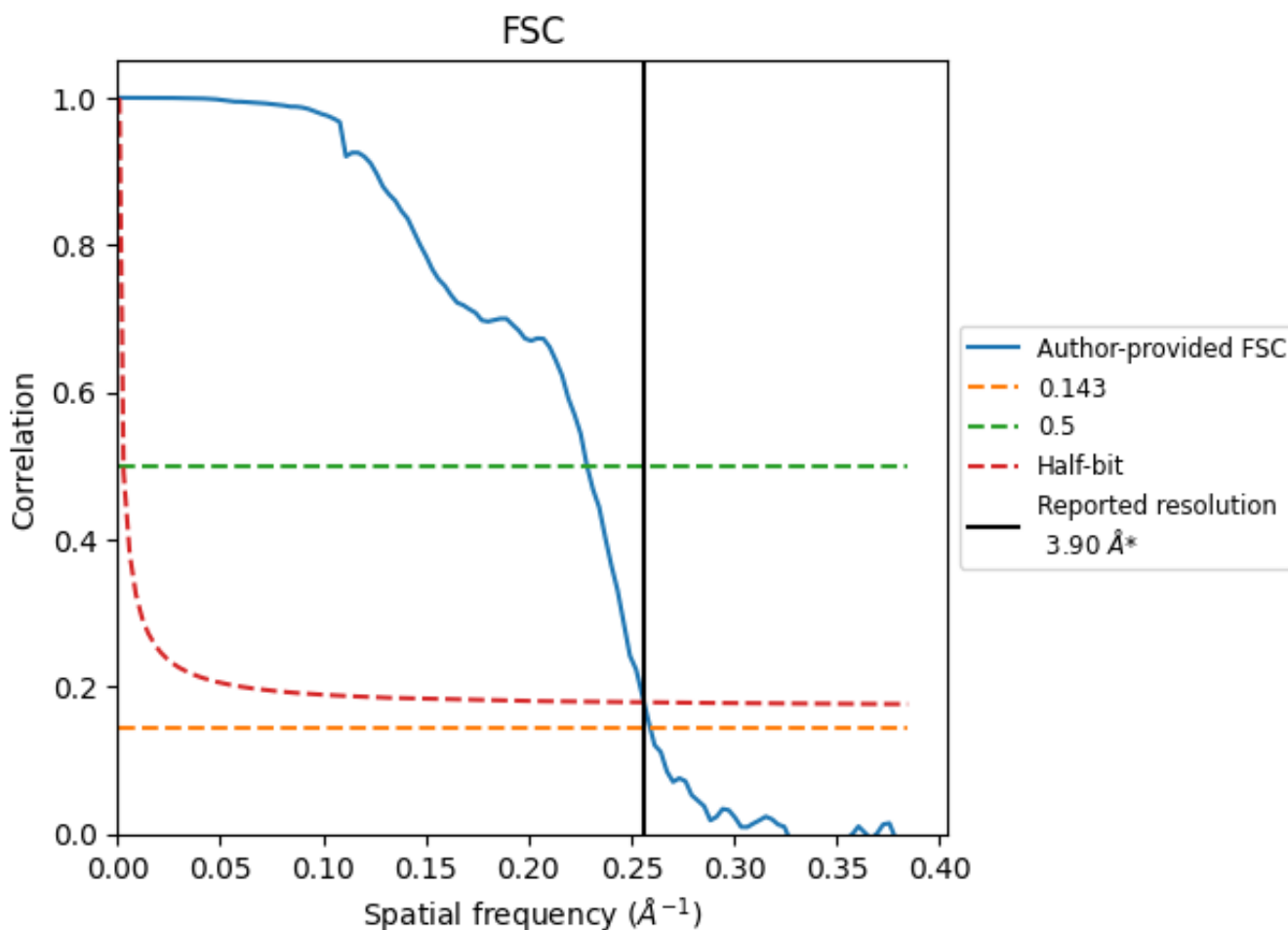


*Reported resolution corresponds to spatial frequency of 0.256 Å⁻¹

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 0.256 Å⁻¹

8.2 Resolution estimates [i](#)

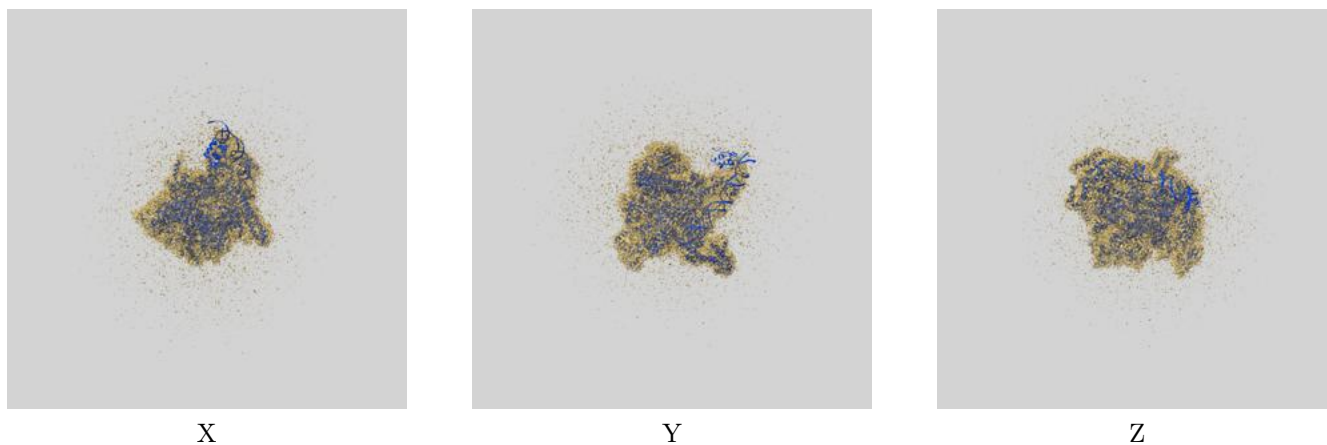
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.90	-	-
Author-provided FSC curve	3.86	4.38	3.90
Unmasked-calculated*	-	-	-

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

9 Map-model fit [i](#)

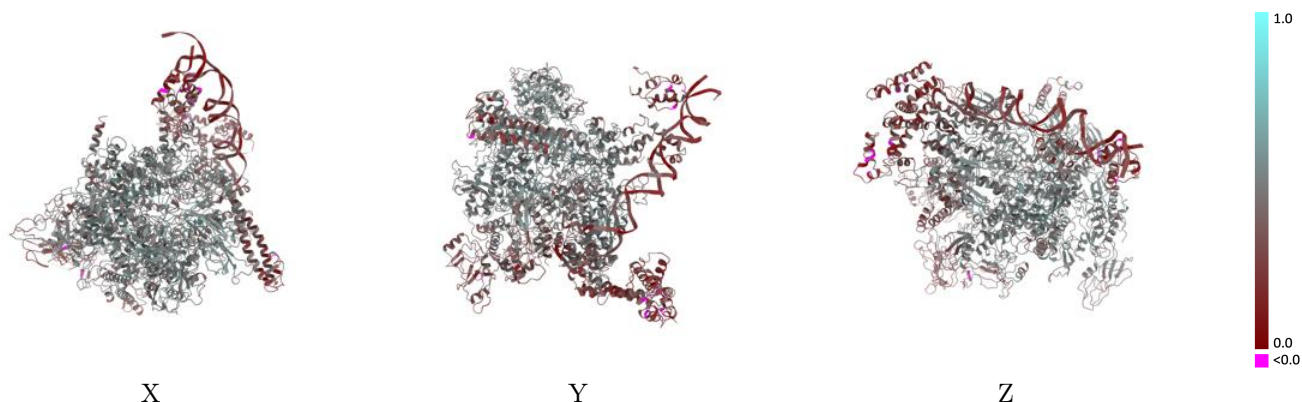
This section contains information regarding the fit between EMDB map EMD-20464 and PDB model 6PSU. Per-residue inclusion information can be found in section 3 on page 8.

9.1 Map-model overlay [i](#)



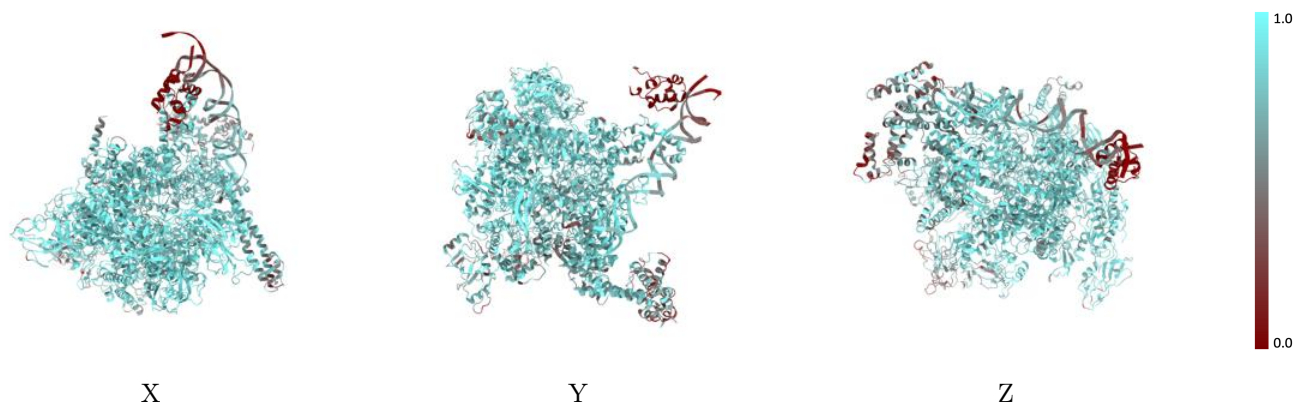
The images above show the 3D surface view of the map at the recommended contour level 0.02 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



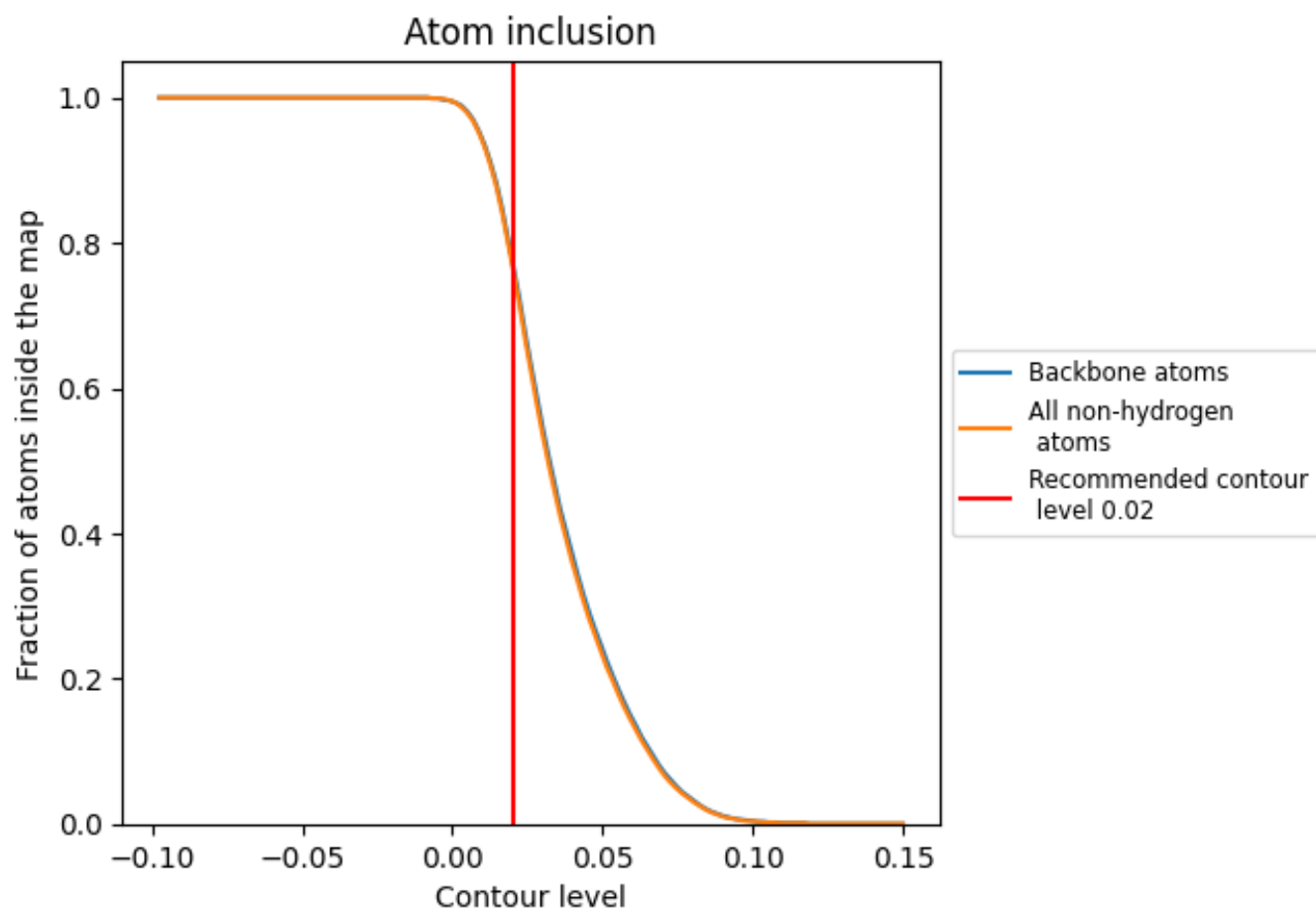
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.02).























9.4 Atom inclusion [i](#)



At the recommended contour level, 78% of all backbone atoms, 77% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (0.02) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.7690	 0.4260
G	 0.8540	 0.4910
H	 0.8310	 0.4540
I	 0.8310	 0.4600
J	 0.8070	 0.4510
K	 0.6990	 0.4460
L	 0.6740	 0.3370
M	 0.0520	 0.2280
N	 0.8300	 0.4370
O	 0.5680	 0.2450
P	 0.5250	 0.2260

