Full wwPDB EM Validation Report ⓘ

Mar 20, 2024 – 12:03 PM JST

PDB ID	:	7C97
EMDB ID	:	EMD-30307
Title	:	Cryo-EM structure of an Escherichia coli RNAP-promoter open complex (RPo) with SspA
Authors	:	Lin, W.; Feng, Y.
Deposited on	:	2020-06-05
Resolution	:	3.68 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:

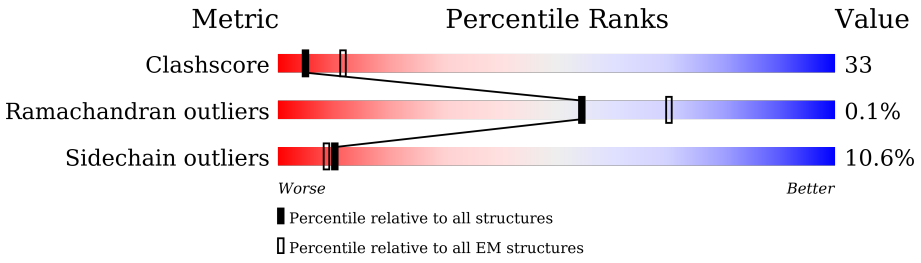
EMDB validation analysis	:	0.0.1.dev70
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

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 3.68 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 <=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	H	63	37% 35% 65%
2	I	212	34% 39% 53% 5% •
2	J	212	29% 35% 55% 5% 5%
3	A	329	5% 35% 31% • 30%
3	B	329	8% 34% 30% 5% 31%
3	K	329	20% 13% 6% • 80%
4	C	1342	9% 49% 45% 6%
5	D	1407	16% 47% 43% 6% 5%

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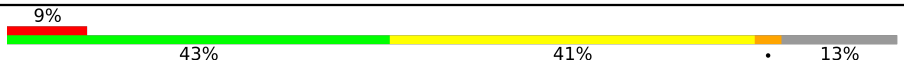
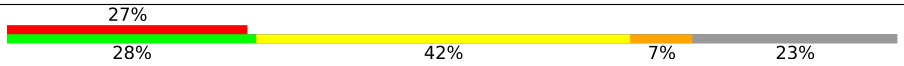
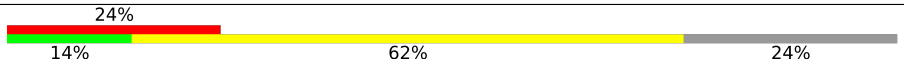
Mol	Chain	Length	Quality of chain
6	E	91	
7	F	613	
8	G	63	

2 Entry composition

There are 10 unique types of molecules in this entry. The entry contains 35581 atoms, of which 532 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 DNA chain called DNA (63-mer).

Mol	Chain	Residues	Atoms					AltConf	Trace
1	H	63	Total	C	N	O	P	0	0
			1312	623	256	370	63		

- Molecule 2 is a protein called Stringent starvation protein A.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	I	206	Total	C	N	O	S	0	0
			1663	1066	279	310	8		
2	J	201	Total	C	N	O	S	0	0
			1629	1046	272	303	8		

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

Mol	Chain	Residues	Atoms						AltConf	Trace
3	K	67	Total	C	H	N	O	S	0	0
			1050	328	532	88	100	2		
3	A	230	Total	C	N	O	S		0	0
			1787	1112	317	352	6			
3	B	226	Total	C	N	O	S		0	0
			1755	1094	310	345	6			

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

Mol	Chain	Residues	Atoms					AltConf	Trace
4	C	1340	Total	C	N	O	S	0	0
			10569	6632	1841	2053	43		

There is a discrepancy between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	516	VAL	ASP	engineered mutation	UNP P0A8V2

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

Mol	Chain	Residues	Atoms					AltConf	Trace
5	D	1343	Total 10368	C 6512	N 1846	O 1960	S 50	0	0

- Molecule 6 is a protein called DNA-directed RNA polymerase subunit omega.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	E	79	Total 627	C 382	N 118	O 126	S 1	0	0

- Molecule 7 is a protein called RNA polymerase sigma factor RpoD.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	F	472	Total 3845	C 2408	N 685	O 729	S 23	0	0

- Molecule 8 is a DNA chain called DNA (63-mer).

Mol	Chain	Residues	Atoms					AltConf	Trace
8	G	48	Total 973	C 469	N 161	O 295	P 48	0	0

- Molecule 9 is MAGNESIUM ION (three-letter code: MG) (formula: Mg) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
9	D	1	Total 1	Mg 1	0

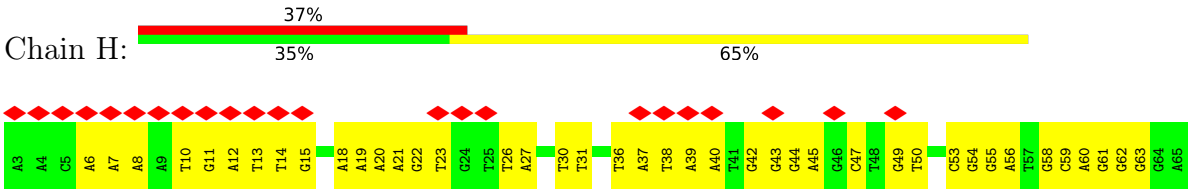
- Molecule 10 is ZINC ION (three-letter code: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
10	D	2	Total 2	Zn 2	0

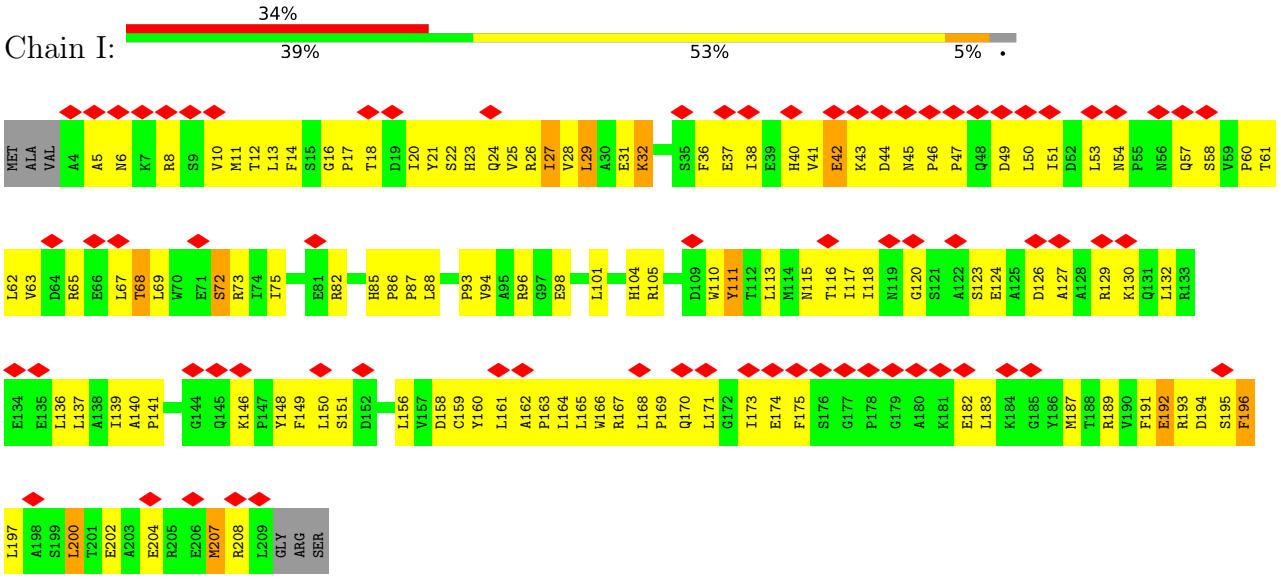
3 Residue-property plots (i)

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

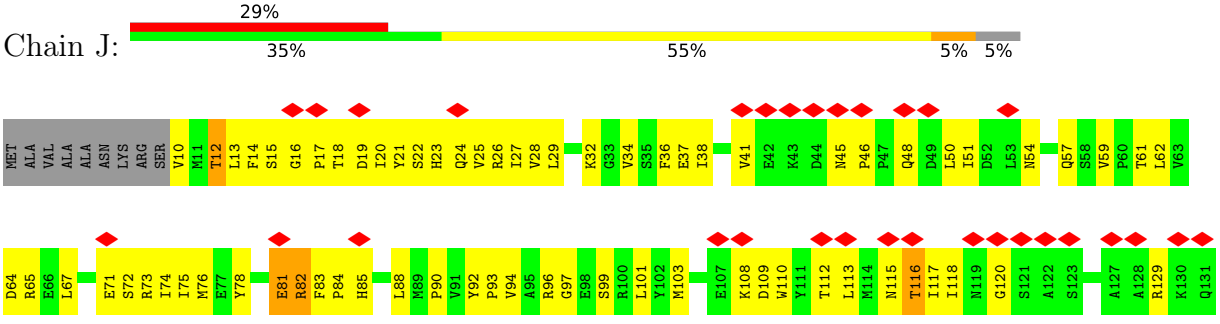
• Molecule 1: DNA (63-mer)

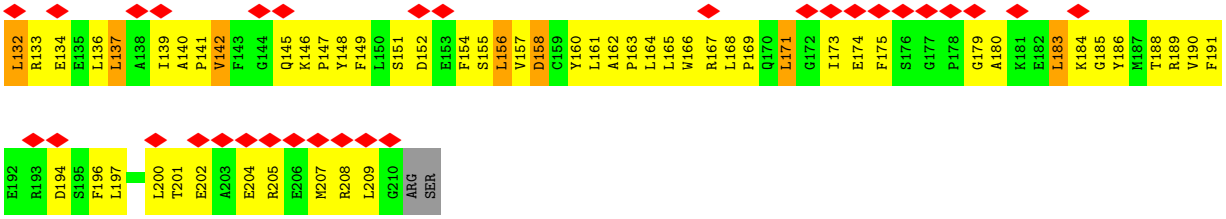


• Molecule 2: Stringent starvation protein A

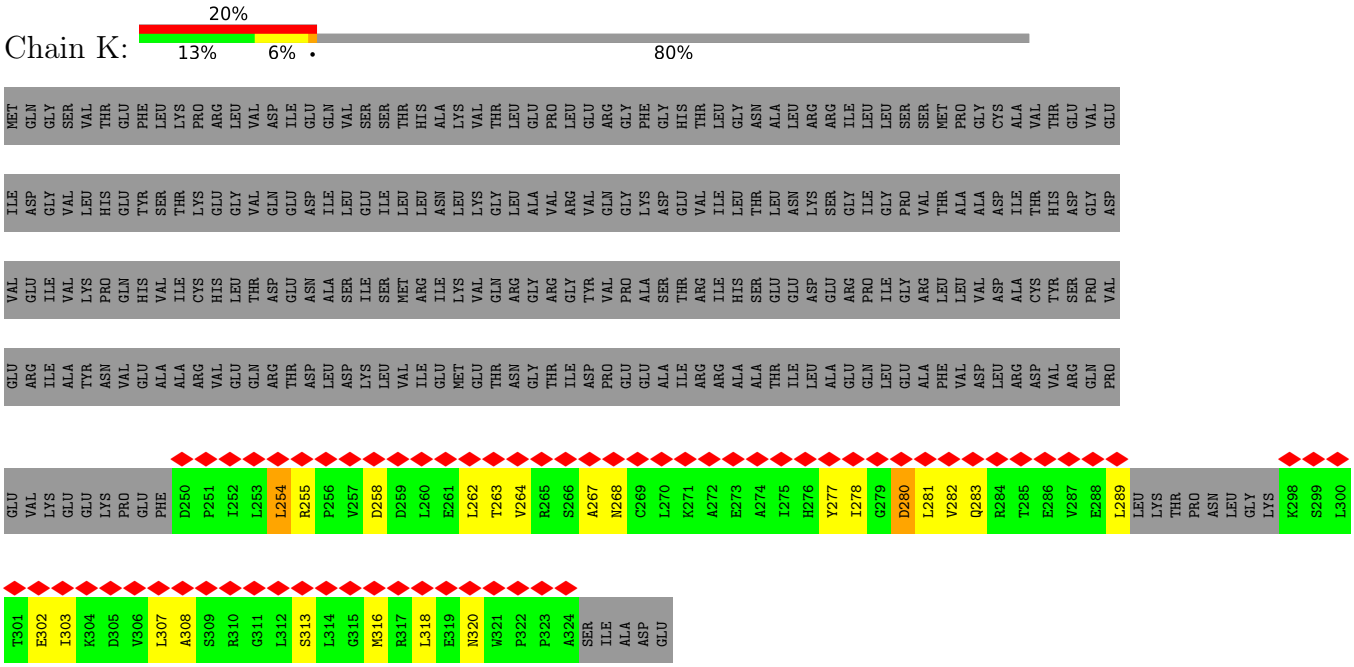


• Molecule 2: Stringent starvation protein A

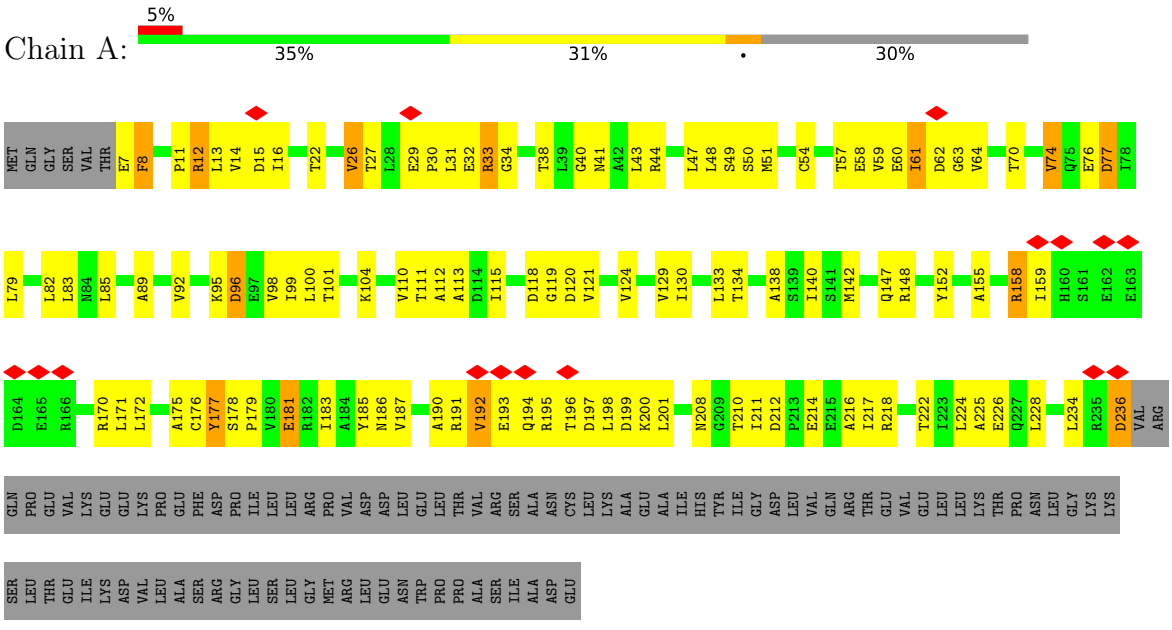




• Molecule 3: DNA-directed RNA polymerase subunit alpha

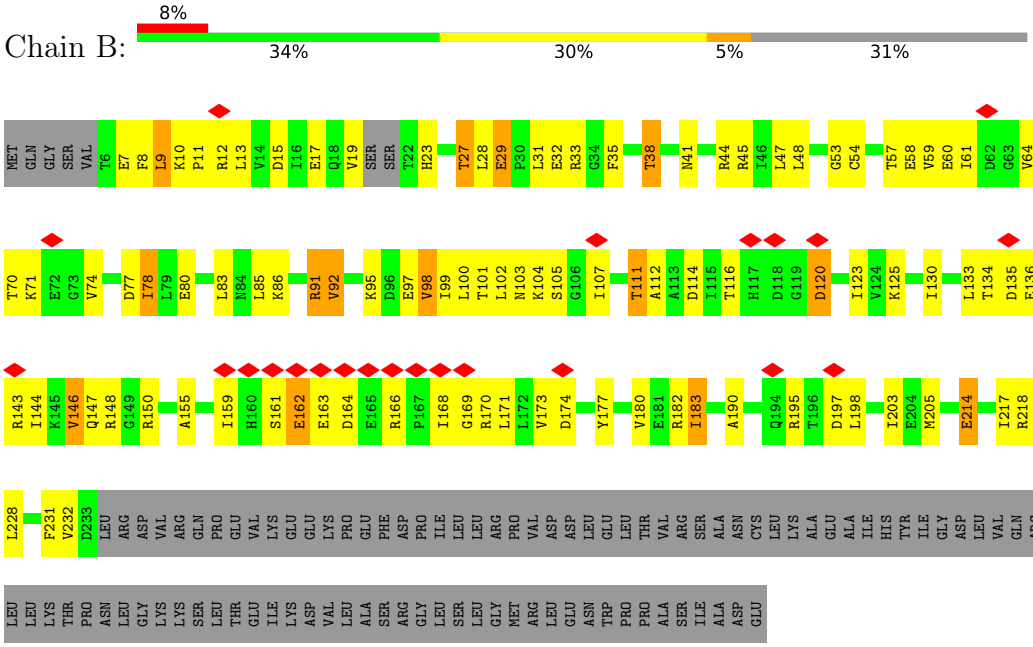


• Molecule 3: DNA-directed RNA polymerase subunit alpha



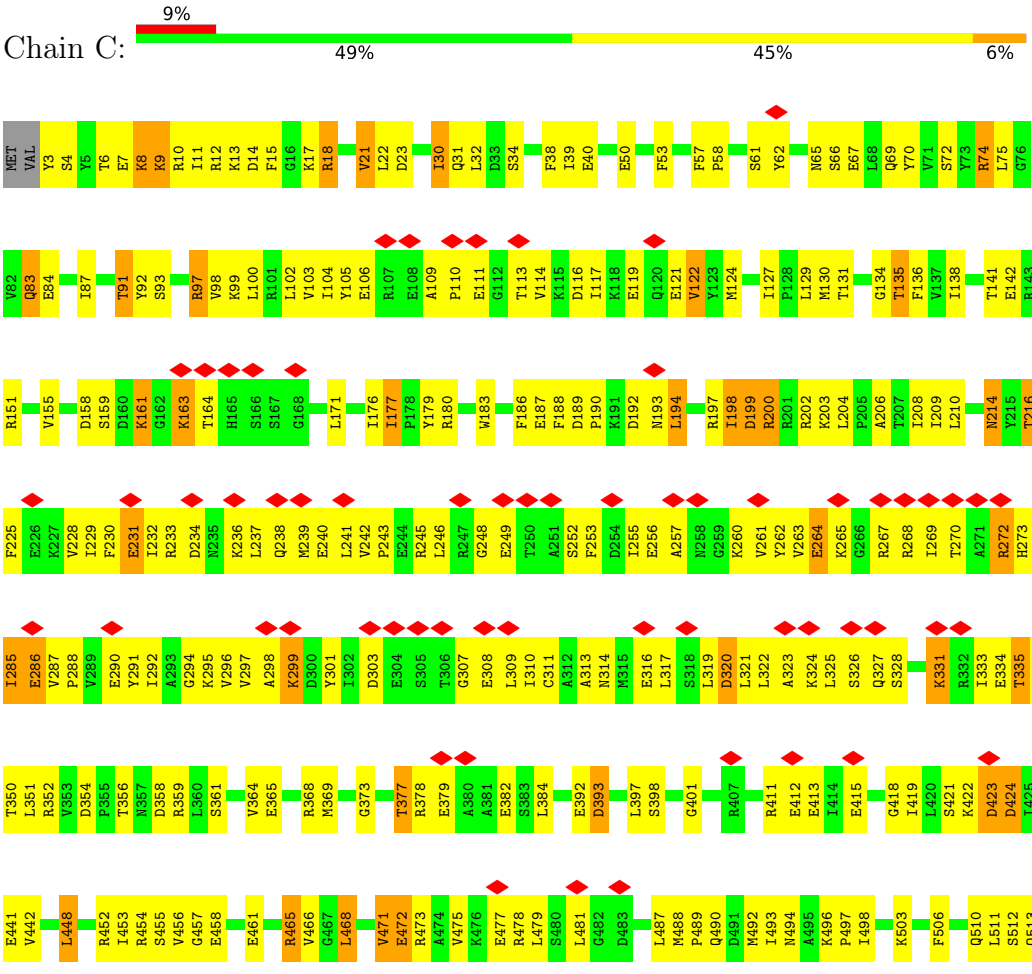
• Molecule 3: DNA-directed RNA polymerase subunit alpha

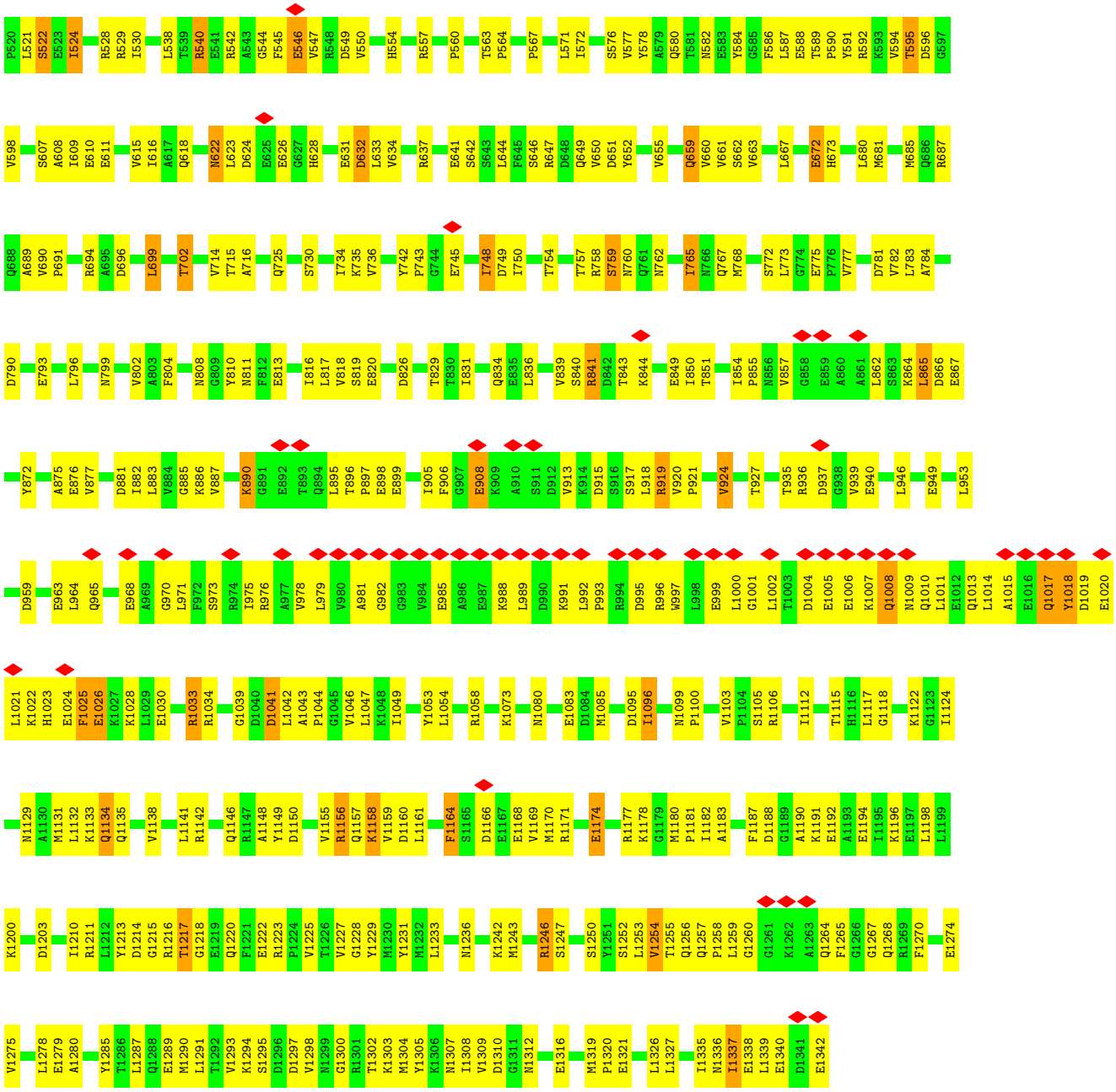
Chain B:



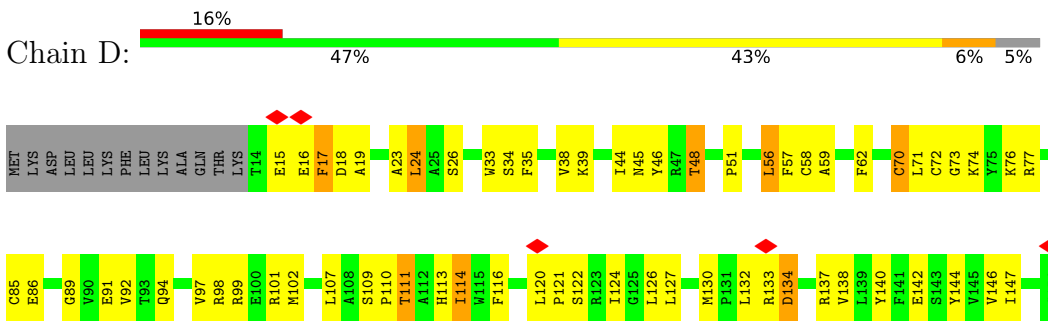
• Molecule 4: DNA-directed RNA polymerase subunit beta

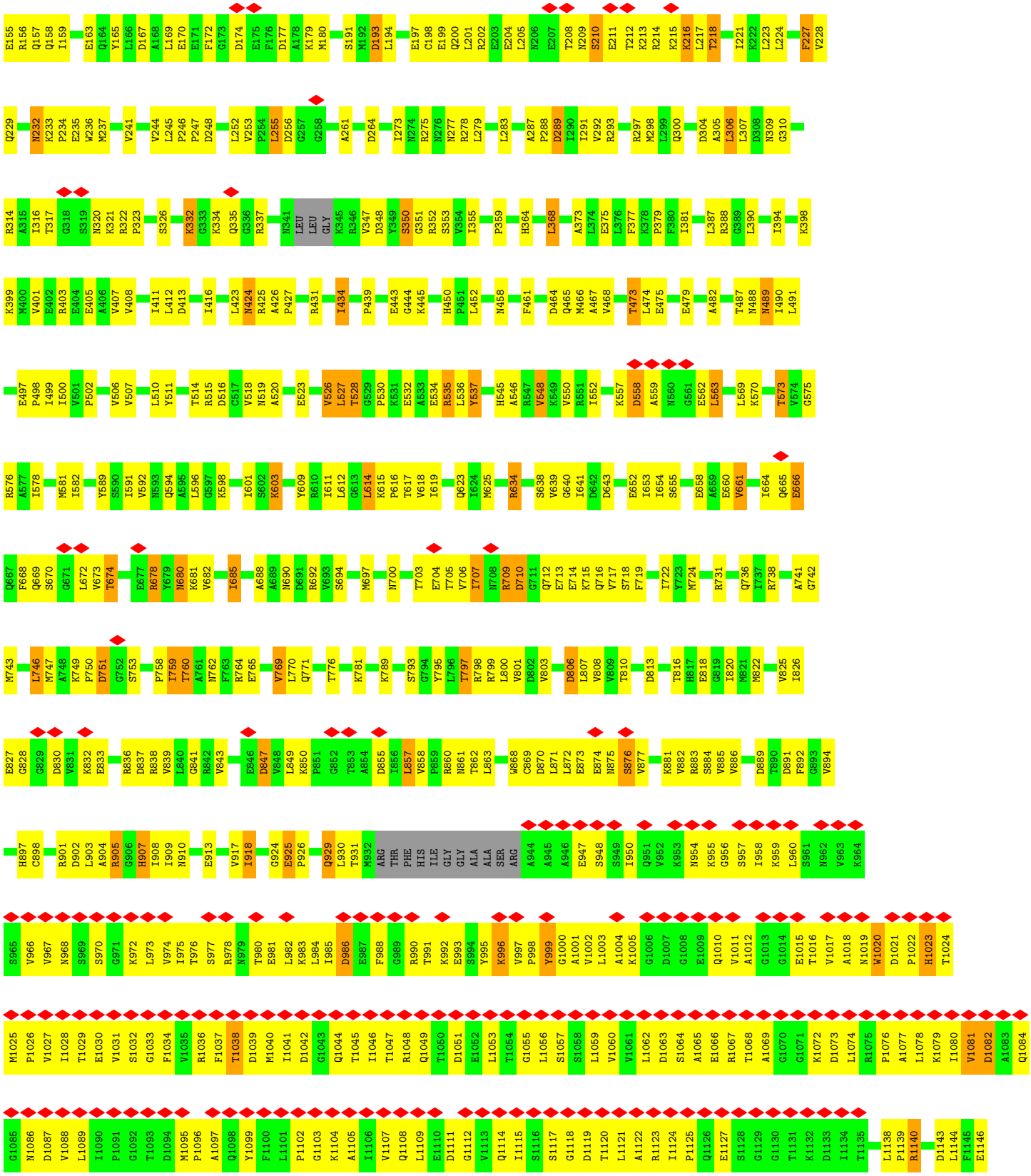
Chain C:

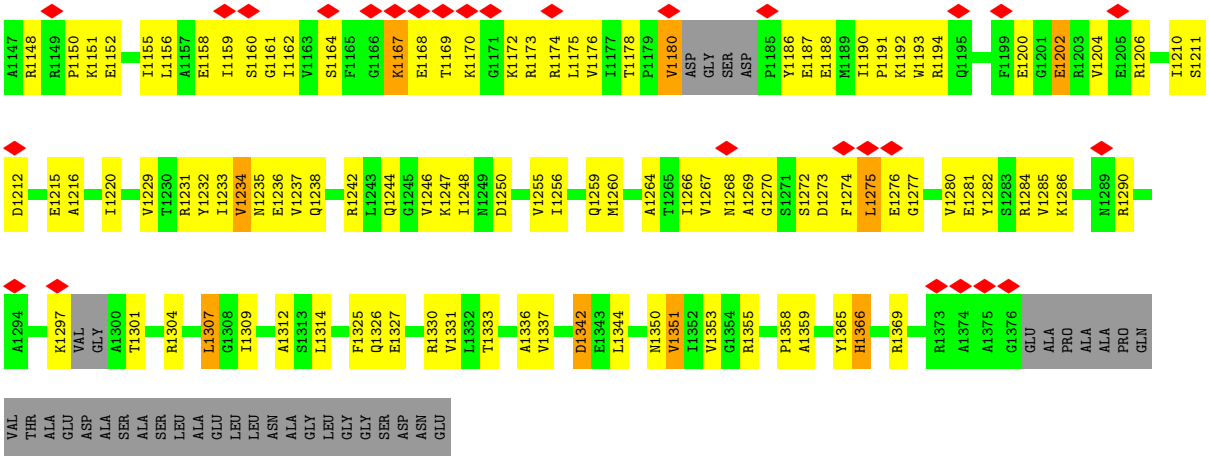




• Molecule 5: DNA-directed RNA polymerase subunit beta'

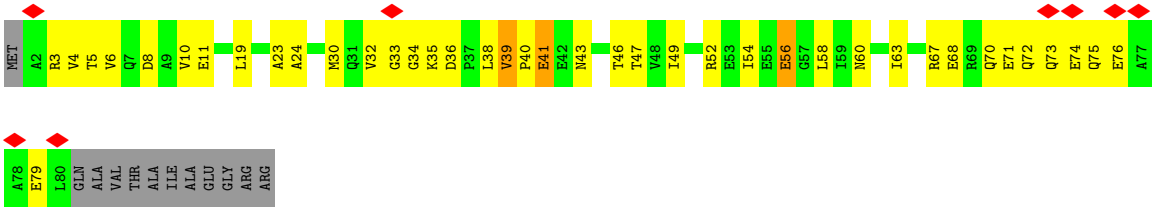



E155 R156 Q157 Q158 I159 E163 Q164 Y165 L166 D167 A168 L169 E170 E171 F172 G173 D174 E175 F176 D177 A178 K179 M180 S191 M192 D193 L194 E197 C198 E199 Q200 L201 R202 E203 E204 L205 N206 E207 T208 N209 S210 E211 T212 K213 R214 K215 K216 L217 T218 I221 K222 L223 L224 F227 V228
Q229 N232 K233 P234 E235 W236 M237 V241 V244 L245 P246 P247 D248 L252 V253 P254 L255 D256 G257 G258 A261 D264 I273 N274 R275 N276 N277 R278 L279 L283 A287 P288 D289 I290 I291 V292 R293 R297 M298 L299 Q300 D304 A305 L306 L307 D308 N309 G310
R314 A315 I316 T317 G318 S319 N320 K321 R322 P323 S326 K332 G333 K334 Q335 G336 R337 N341 LEU LEU GLY K345 R346 V347 D348 Y349 S350 G351 R352 S353 V354 I355 P359 H364 L368 A373 L374 E375 L376 F377 K378 P379 F380 I381 L387 R388 G389 L390 I394 K398
K399 M400 V401 E402 R403 E404 E405 A406 V407 V408 I411 L412 D413 I416 L423 N424 R425 A426 P427 R431 I434 P439 E443 G444 K445 H450 P451 L452 N458 F461 D464 Q465 M466 A467 V468 T473 L474 E475 E479 A482 T487 N488 N489 I490 L491
E497 P498 I499 I500 V501 P502 V506 V507 L510 Y511 T514 R515 D516 C517 V518 N519 A520 E523 V526 L527 T528 G529 P530 K531 E532 A533 E534 R535 L536 Y537 H545 A546 R547 V548 K549 V550 R551 I552 K557 D558 A559 N560 G561 E562 L563 L569 K570 T573 V574 G575
R576 A577 I578 M581 I582 Y589 S590 I591 V592 N593 Q594 A595 L596 G597 K598 I601 S602 K603 Y609 R610 I611 L612 G613 L614 K615 P616 T617 V618 I619 Q623 I624 M625 R634 S638 V639 G640 I641 D642 D643 E652 I653 I654 S655 E658 A659 E660 V661 I664 Q665 E666
Q667 F668 Q669 S670 G671 L672 V673 T674 E677 R678 Y679 N680 K681 V682 I685 A688 A689 N690 D691 R692 V693 S694 W697 N700 T703 E704 T705 V706 I707 N708 R709 D710 G711 Q712 E713 E714 K715 Q716 V717 S718 F719 I722 Y723 M724 R731 Q736 I737 R738 A741 G742
M743 L746 M747 A748 K749 P750 D751 G752 S753 P758 I759 T760 A761 N762 F763 R764 E765 V769 L770 Q771 T776 K781 K789 S793 G794 Y795 L796 T797 R798 R799 L800 V801 D802 V803 D806 L807 V808 W809 T810 D813 T816 H817 E818 G819 I820 M821 H822 V825 I826
E827 G828 G829 D830 V831 K832 E833 R836 D837 R838 V839 L840 G841 R842 V843 E846 D847 V848 L849 K850 P851 G852 T853 A854 D855 I856 L857 V858 P859 R860 N861 T862 L863 W868 C869 D870 L871 L872 E873 E874 N875 S876 V877 K881 V882 R883 S884 V885 V886 D889 T890 D891 F892 G893 V894
H897 C898 R901 D902 L903 A904 R905 G906 H907 I908 I909 N910 E913 V917 I918 G924 E925 P926 Q929 L930 T931 M932 ARG THR PHE HIS ILE GLY GLY ALA ALA SER ARG A944 A945 A946 E947 S948 S949 I950 Q951 V952 K953 N954 K955 G956 S957 I958 K959 L960 S961 N962 V963 K964
S965 V966 V967 N968 S969 S970 G971 K972 L973 V974 I975 T976 S977 R978 N979 T980 E981 L982 K983 L984 I985 D986 E987 F988 G989 R990 T991 K992 E993 S994 Y995 K996 V997 P998 Y999 G1000 A1001 V1002 L1003 A1004 K1005 G1006 D1007 G1008 E1009 Q1010 V1011 A1012 G1013 G1014 E1015 T1016 V1017 A1018 N1019 W1020 D1021 P1022 H1023 T1024
M1025 P1026 V1027 I1028 T1029 E1030 V1031 S1032 G1033 F1034 V1035 R1036 F1037 T1038 D1039 M1040 I1041 D1042 G1043 Q1044 T1045 I1046 T1047 R1048 Q1049 T1050 D1051 E1052 L1053 T1054 G1055 L1056 S1057 S1058 L1059 V1060 V1061 L1062 D1063 S1064 A1065 E1066 R1067 T1068 A1069 G1070 G1071 K1072 D1073 L1074 R1075 P1076 A1077 L1078 K1079 I1080 V1081 D1082 A1083 Q1084
G1085 N1086 D1087 V1088 L1089 I1090 P1091 G1092 T1093 D1094 M1095 P1096 A1097 Q1098 Y1099 F1100 L1101 P1102 G1103 K1104 A1105 I1106 V1107 Q1108 L1109 E1110 D1111 G1112 V1113 Q1114 I1115 S1116 S1117 G1118 D1119 T1120 L1121 A1122 R1123 I1124 P1125 Q1126 E1127 S1128 G1129 G1130 T1131 K1132 D1133 I1134 T1135 L1138 P1139 R1140 D1143 L1144 F1145 E1146



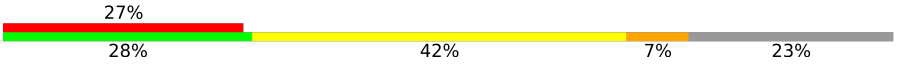
• Molecule 6: DNA-directed RNA polymerase subunit omega

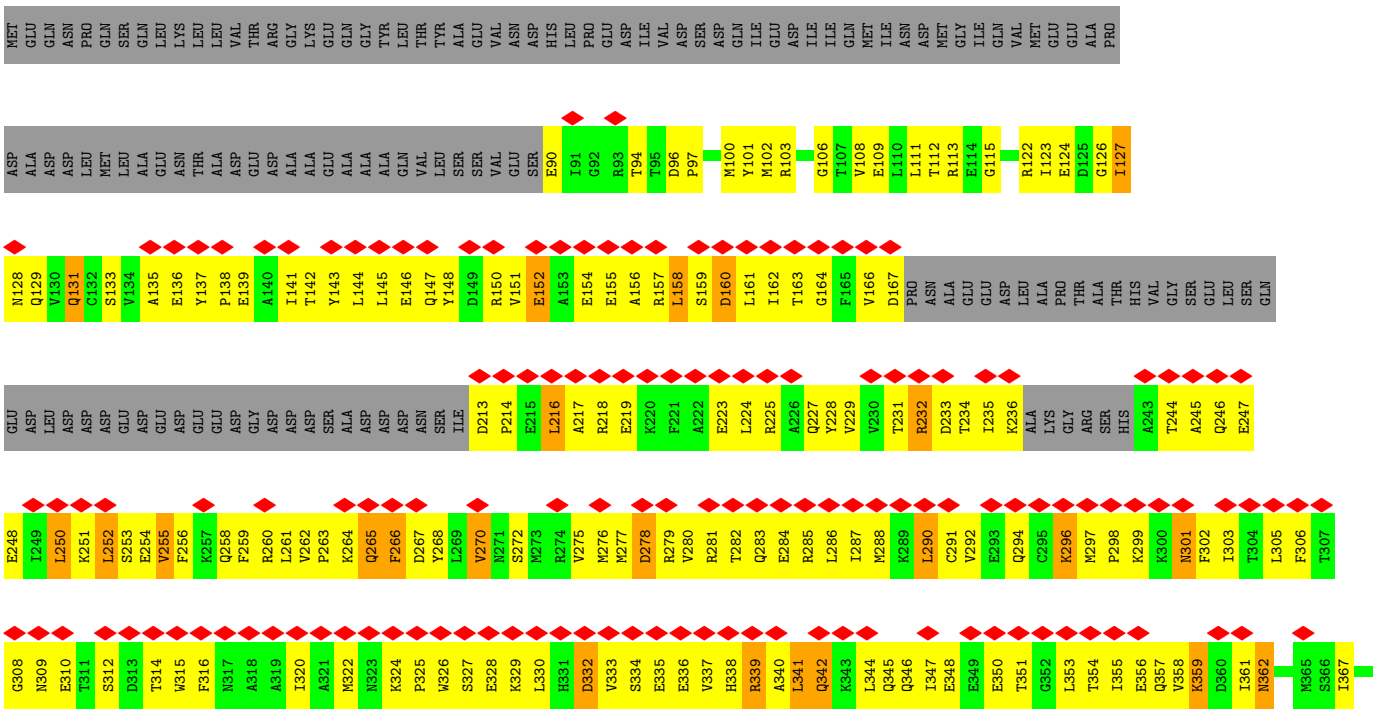
Chain E:

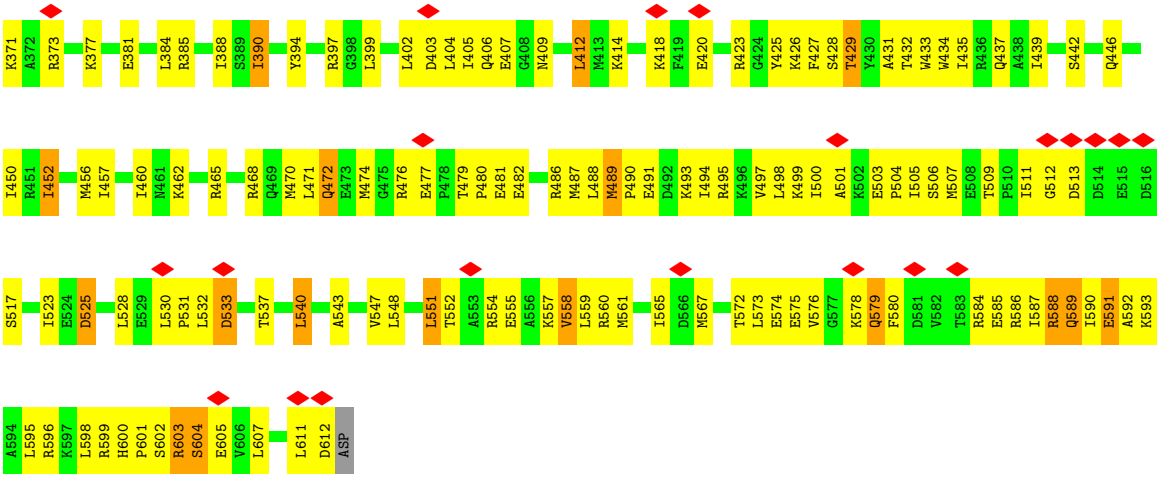


• Molecule 7: RNA polymerase sigma factor RpoD

Chain F:

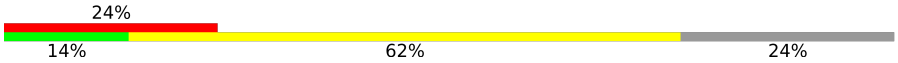


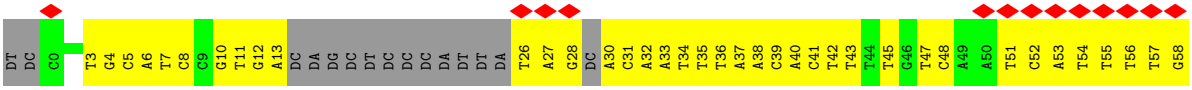




- Molecule 8: DNA (63-mer)

Chain G:





4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	60145	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 ($e^-/Å^2$)	59	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	0.170	Depositor
Minimum map value	-0.112	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.008	Depositor
Recommended contour level	0.026	Depositor
Map size (Å)	261.4, 261.4, 261.4	wwPDB
Map dimensions	200, 200, 200	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.3069999, 1.3069999, 1.3069999	Depositor

5 Model quality

5.1 Standard geometry

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

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	H	0.62	0/1478	0.92	0/2283
2	I	0.30	0/1704	0.45	0/2313
2	J	0.30	0/1670	0.44	0/2267
3	A	0.39	0/1809	0.49	0/2451
3	B	0.34	0/1776	0.51	0/2406
3	K	0.31	0/524	0.68	0/711
4	C	0.41	0/10738	0.49	0/14488
5	D	0.40	0/10521	0.49	0/14208
6	E	0.37	0/629	0.47	0/847
7	F	0.30	0/3896	0.44	0/5236
8	G	0.60	0/1084	0.99	0/1664
All	All	0.40	0/35829	0.54	0/48874

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	H	1312	0	709	81	0
2	I	1663	0	1646	144	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	J	1629	0	1613	150	0
3	A	1787	0	1810	105	0
3	B	1755	0	1778	115	0
3	K	518	532	531	13	0
4	C	10569	0	10587	647	0
5	D	10368	0	10517	700	0
6	E	627	0	634	34	0
7	F	3845	0	3913	400	0
8	G	973	0	550	47	0
9	D	1	0	0	0	0
10	D	2	0	0	0	0
All	All	35049	532	34288	2276	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 33.

All (2276) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:42:DG:O6	7:F:106:GLY:HA3	1.36	1.21
5:D:1089:LEU:HA	5:D:1096:PRO:HA	1.30	1.11
7:F:476:ARG:HG2	7:F:477:GLU:HG2	1.37	1.06
4:C:993:PRO:HG2	4:C:996:ARG:HB3	1.41	1.03
2:I:12:THR:HB	2:I:63:VAL:HB	1.44	1.00
3:B:47:LEU:HD12	3:B:183:ILE:HD12	1.43	0.99
5:D:973:LEU:HB2	5:D:1003:LEU:HD12	1.45	0.99
4:C:560:PRO:HB2	5:D:776:THR:HG21	1.40	0.98
2:I:117:ILE:HG22	2:I:171:LEU:HD12	1.45	0.96
4:C:1146:GLN:OE1	4:C:1160:ASP:HB3	1.62	0.96
7:F:250:LEU:HD22	7:F:254:GLU:HG3	1.45	0.96
5:D:972:LYS:HG3	5:D:1002:VAL:HG23	1.48	0.96
4:C:228:VAL:HB	4:C:335:THR:HG23	1.48	0.95
1:H:39:DA:H2"	1:H:40:DA:H5"	1.46	0.95
5:D:1011:VAL:HG21	5:D:1017:VAL:HB	1.45	0.95
4:C:398:SER:HB2	4:C:401:GLY:H	1.32	0.94
5:D:1079:LYS:HD3	5:D:1087:ASP:HB3	1.49	0.94
4:C:1160:ASP:OD2	4:C:1161:LEU:N	2.01	0.94
5:D:980:THR:HB	5:D:997:VAL:HB	1.49	0.94
7:F:111:LEU:HD11	7:F:115:GLY:HA3	1.47	0.93
5:D:559:ALA:HB3	5:D:562:GLU:HG2	1.49	0.93
4:C:1017:GLN:HA	4:C:1020:GLU:HB2	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:746:LEU:HB3	5:D:758:PRO:HB3	1.52	0.91
1:H:42:DG:H1'	1:H:43:DG:C1'	2.01	0.90
7:F:141:ILE:HD13	7:F:224:LEU:HD21	1.50	0.90
7:F:585:GLU:HA	7:F:588:ARG:HH11	1.37	0.90
6:E:56:GLU:HB3	6:E:58:LEU:HD13	1.54	0.90
4:C:1260:GLY:HA3	4:C:1265:PHE:HA	1.52	0.89
2:J:175:PHE:HB3	2:J:180:ALA:HB2	1.53	0.89
5:D:925:GLU:HG3	5:D:926:PRO:HD3	1.53	0.89
4:C:1004:ASP:HA	4:C:1008:GLN:HG2	1.55	0.89
2:I:41:VAL:HG11	2:I:47:PRO:HD3	1.54	0.89
5:D:424:ASN:HB2	5:D:434:ILE:HG12	1.54	0.89
4:C:979:LEU:HD12	4:C:1007:LYS:HB2	1.55	0.88
1:H:38:DT:H2"	1:H:39:DA:H5'	1.55	0.88
7:F:160:ASP:HB3	7:F:264:LYS:HG3	1.55	0.88
5:D:704:GLU:HB2	5:D:718:SER:HB2	1.54	0.88
7:F:144:LEU:HD12	7:F:147:GLN:HB2	1.56	0.87
8:G:47:DT:H2"	8:G:48:DC:H5'	1.55	0.87
5:D:368:LEU:HD23	5:D:373:ALA:HB2	1.55	0.87
4:C:198:ILE:HG22	4:C:199:ASP:H	1.38	0.86
5:D:1039:ASP:HB3	5:D:1074:LEU:HB3	1.58	0.86
1:H:37:DA:H61	7:F:420:GLU:HB3	1.41	0.86
3:B:105:SER:HB3	3:B:138:ALA:HB1	1.56	0.86
5:D:789:LYS:HE3	5:D:931:THR:HB	1.57	0.86
4:C:276:GLN:HA	4:C:279:LYS:HD3	1.57	0.85
4:C:876:GLU:HG2	4:C:927:THR:HG22	1.57	0.85
6:E:39:VAL:HG22	6:E:40:PRO:HD2	1.56	0.85
4:C:319:LEU:HD12	4:C:322:LEU:HD12	1.59	0.85
4:C:1149:TYR:CG	4:C:1159:VAL:HG11	2.11	0.84
5:D:1167:LYS:HE3	5:D:1170:LYS:HB2	1.58	0.84
4:C:1015:ALA:HA	4:C:1018:TYR:HB3	1.58	0.84
4:C:1117:LEU:HD11	4:C:1182:ILE:HG21	1.57	0.84
2:I:113:LEU:HD23	2:I:132:LEU:HB2	1.59	0.84
4:C:272:ARG:HA	4:C:275:ARG:HD2	1.59	0.84
4:C:1103:VAL:HG21	4:C:1112:ILE:HD11	1.60	0.84
1:H:42:DG:H1'	1:H:43:DG:H1'	1.57	0.83
5:D:747:MET:HG3	5:D:759:ILE:HD11	1.58	0.83
5:D:926:PRO:HG2	5:D:1248:ILE:HD11	1.59	0.83
2:I:82:ARG:HH12	2:J:94:VAL:HG13	1.44	0.83
3:A:104:LYS:HD3	3:A:110:VAL:HG22	1.61	0.83
4:C:238:GLN:HB3	4:C:284:LEU:HD11	1.58	0.83
5:D:194:LEU:HD12	5:D:224:LEU:HD22	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:1031:VAL:HG21	5:D:1088:VAL:HG21	1.60	0.82
6:E:4:VAL:HG23	6:E:5:THR:HG23	1.59	0.82
4:C:471:VAL:HB	4:C:498:ILE:HD11	1.61	0.82
7:F:574:GLU:HG2	7:F:588:ARG:HH22	1.45	0.82
4:C:1327:LEU:HD22	4:C:1337:ILE:HG21	1.61	0.81
5:D:1031:VAL:HG13	5:D:1080:ILE:HG21	1.62	0.81
7:F:390:ILE:HD11	7:F:432:THR:HG23	1.59	0.81
4:C:106:GLU:HG2	4:C:109:ALA:HB3	1.61	0.81
3:A:111:THR:HG23	3:A:113:ALA:H	1.45	0.80
5:D:515:ARG:HH22	5:D:717:VAL:HB	1.47	0.80
7:F:320:ILE:HA	7:F:327:SER:HB2	1.61	0.80
5:D:958:ILE:HG22	5:D:960:LEU:HD21	1.64	0.79
4:C:231:GLU:HG3	4:C:233:ARG:HG3	1.64	0.79
5:D:1155:ILE:HG13	5:D:1210:ILE:HB	1.65	0.79
5:D:322:ARG:HG2	5:D:323:PRO:HD2	1.63	0.79
4:C:1164:PHE:HB2	4:C:1168:GLU:HB2	1.65	0.79
4:C:985:GLU:HG2	4:C:988:LYS:HD3	1.65	0.78
4:C:1149:TYR:HB3	4:C:1159:VAL:HG11	1.65	0.78
7:F:224:LEU:HD22	7:F:259:PHE:HE2	1.48	0.78
3:B:166:ARG:HB3	3:B:170:ARG:HG3	1.64	0.78
5:D:1029:THR:HB	5:D:1119:ASP:H	1.47	0.78
6:E:76:GLU:HA	6:E:79:GLU:HB2	1.66	0.78
5:D:552:ILE:HD11	5:D:570:LYS:HG3	1.66	0.78
8:G:5:DC:H2"	8:G:6:DA:H5'	1.66	0.78
5:D:213:LYS:HA	5:D:216:LYS:HE3	1.64	0.77
7:F:286:LEU:HD21	7:F:290:LEU:HD23	1.66	0.77
5:D:983:LYS:HE3	5:D:991:THR:HB	1.63	0.77
5:D:1204:VAL:HG21	5:D:1210:ILE:HD11	1.66	0.77
2:I:23:HIS:HA	2:I:26:ARG:HG3	1.67	0.77
7:F:465:ARG:HH22	8:G:26:DT:H2'	1.48	0.77
2:I:46:PRO:HG2	2:I:51:ILE:HD11	1.66	0.77
5:D:1102:PRO:HG2	5:D:1124:ILE:HG12	1.68	0.76
5:D:706:VAL:HG12	5:D:715:LYS:HB3	1.67	0.76
4:C:57:PHE:HD1	4:C:70:TYR:HB2	1.51	0.76
4:C:979:LEU:HG	4:C:1002:LEU:HD22	1.68	0.76
4:C:423:ASP:OD1	4:C:423:ASP:N	2.17	0.76
2:I:14:PHE:HB3	2:I:50:LEU:HD22	1.68	0.76
4:C:199:ASP:O	4:C:200:ARG:HG2	1.85	0.76
7:F:530:LEU:HD23	7:F:531:PRO:HD2	1.67	0.76
2:I:168:LEU:HB3	2:I:169:PRO:HD3	1.67	0.76
4:C:690:VAL:HG23	4:C:1236:ASN:HB3	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:130:MET:HE1	5:D:157:GLN:HB3	1.66	0.76
4:C:194:LEU:HB3	4:C:206:ALA:HB3	1.68	0.75
2:I:47:PRO:HD2	2:I:50:LEU:HD23	1.67	0.75
2:J:113:LEU:HD23	2:J:132:LEU:HD13	1.68	0.75
2:J:117:ILE:HG22	2:J:171:LEU:HD12	1.66	0.75
5:D:1011:VAL:HG12	5:D:1015:GLU:HB3	1.69	0.75
7:F:167:ASP:HB3	7:F:258:GLN:HE21	1.50	0.75
4:C:758:ARG:NH1	4:C:762:ASN:OD1	2.20	0.75
3:B:48:LEU:HD22	5:D:535:ARG:HG3	1.67	0.75
3:B:97:GLU:OE2	3:B:147:GLN:NE2	2.20	0.75
5:D:1049:GLN:HB2	5:D:1059:LEU:HD11	1.66	0.75
5:D:332:LYS:NZ	5:D:332:LYS:HB3	2.02	0.74
5:D:490:ILE:HD11	5:D:614:LEU:HD12	1.69	0.74
5:D:827:GLU:HB2	5:D:832:LYS:HG2	1.69	0.74
7:F:147:GLN:O	7:F:151:VAL:N	2.20	0.74
4:C:424:ASP:OD1	4:C:424:ASP:N	2.21	0.74
7:F:561:MET:HE2	7:F:576:VAL:HG22	1.70	0.74
4:C:198:ILE:HG22	4:C:199:ASP:N	2.03	0.74
4:C:642:SER:HB3	5:D:770:LEU:HD21	1.69	0.74
5:D:156:ARG:NH2	5:D:191:SER:OG	2.21	0.74
5:D:986:ASP:OD1	5:D:986:ASP:N	2.20	0.74
4:C:609:ILE:HD12	4:C:610:GLU:HG3	1.69	0.73
5:D:1036:ARG:HB3	5:D:1079:LYS:HB3	1.70	0.73
2:J:17:PRO:HD3	2:J:41:VAL:HG22	1.69	0.73
5:D:537:TYR:OH	5:D:634:ARG:NH1	2.21	0.73
2:J:133:ARG:HA	2:J:136:LEU:HG	1.68	0.73
7:F:490:PRO:HG2	7:F:493:LYS:HE2	1.70	0.73
7:F:530:LEU:HD22	7:F:532:LEU:H	1.52	0.73
3:A:214:GLU:OE2	3:A:218:ARG:NH2	2.21	0.73
4:C:270:THR:OG1	4:C:273:HIS:N	2.22	0.73
3:A:61:ILE:HB	3:A:64:VAL:HG12	1.70	0.73
4:C:232:ILE:HG23	4:C:237:LEU:HD23	1.69	0.73
4:C:255:ILE:HG12	4:C:263:VAL:HB	1.71	0.73
4:C:736:VAL:HG23	4:C:748:ILE:HA	1.68	0.73
4:C:1033:ARG:O	4:C:1033:ARG:NE	2.21	0.73
5:D:310:GLY:HA2	5:D:314:ARG:HD2	1.69	0.73
2:I:6:ASN:OD1	2:I:65:ARG:N	2.21	0.73
2:J:51:ILE:HG22	2:J:57:GLN:HG2	1.69	0.73
4:C:11:ILE:HG21	4:C:1159:VAL:HG23	1.70	0.73
4:C:1191:LYS:N	4:C:1194:GLU:OE1	2.21	0.73
3:B:61:ILE:HG22	3:B:64:VAL:H	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:314:ASN:HD21	4:C:352:ARG:HG3	1.53	0.72
4:C:1149:TYR:CB	4:C:1159:VAL:HG11	2.20	0.72
2:I:192:GLU:HA	2:I:197:LEU:HD21	1.71	0.72
5:D:81:ARG:NH1	5:D:81:ARG:O	2.22	0.72
4:C:161:LYS:HD3	4:C:161:LYS:H	1.54	0.72
4:C:528:ARG:NH2	4:C:576:SER:O	2.22	0.72
3:A:191:ARG:NH1	3:A:195:ARG:O	2.22	0.72
5:D:482:ALA:O	5:D:488:ASN:ND2	2.22	0.72
1:H:50:DT:OP2	4:C:542:ARG:NH1	2.22	0.72
4:C:3:TYR:N	4:C:7:GLU:OE1	2.22	0.72
4:C:378:ARG:NH1	4:C:382:GLU:OE2	2.21	0.72
5:D:1108:GLN:NE2	5:D:1120:THR:O	2.22	0.72
5:D:352:ARG:NH1	5:D:465:GLN:OE1	2.23	0.72
5:D:832:LYS:HE3	5:D:1242:ARG:HD3	1.72	0.72
2:J:41:VAL:HG12	2:J:46:PRO:HB3	1.72	0.72
3:A:27:THR:HG21	3:A:200:LYS:HE3	1.71	0.72
3:B:164:ASP:O	3:B:166:ARG:NH1	2.22	0.72
4:C:242:VAL:HG22	4:C:245:ARG:HE	1.55	0.72
5:D:1004:ALA:N	5:D:1017:VAL:O	2.21	0.72
8:G:7:DT:H1'	8:G:8:DC:H5'	1.71	0.72
5:D:70:CYS:SG	5:D:71:LEU:N	2.63	0.71
5:D:278:ARG:NH1	7:F:407:GLU:OE2	2.23	0.71
5:D:905:ARG:HH21	5:D:907:HIS:HB2	1.55	0.71
5:D:201:LEU:HD23	5:D:204:GLU:HB2	1.72	0.71
4:C:813:GLU:HB2	5:D:461:PHE:HD2	1.56	0.71
1:H:42:DG:C1'	1:H:43:DG:O4'	2.38	0.71
7:F:296:LYS:HG2	7:F:326:TRP:HB3	1.72	0.71
2:J:18:THR:O	2:J:167:ARG:NH2	2.24	0.71
4:C:100:LEU:HD12	4:C:122:VAL:HG11	1.73	0.71
5:D:475:GLU:HG3	6:E:24:ALA:HB1	1.72	0.71
4:C:1246:ARG:NH1	5:D:348:ASP:OD1	2.23	0.71
7:F:346:GLN:O	7:F:350:GLU:N	2.22	0.71
2:J:28:VAL:HG21	2:J:76:MET:HG2	1.73	0.71
5:D:1172:LYS:HB3	5:D:1191:PRO:HA	1.73	0.71
5:D:573:THR:HG23	5:D:576:ARG:HD2	1.71	0.71
5:D:876:SER:OG	5:D:988:PHE:HB3	1.89	0.71
7:F:474:MET:SD	7:F:476:ARG:NH2	2.64	0.70
5:D:288:PRO:HB3	7:F:377:LYS:HE3	1.73	0.70
2:J:54:ASN:OD1	2:J:57:GLN:N	2.23	0.70
5:D:81:ARG:HB3	5:D:81:ARG:HH11	1.56	0.70
5:D:661:VAL:HG21	5:D:682:VAL:HG13	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:1024:THR:HG23	5:D:1124:ILE:H	1.55	0.70
5:D:1160:SER:OG	5:D:1206:ARG:N	2.25	0.70
1:H:42:DG:H2"	1:H:43:DG:O4'	1.92	0.70
3:A:155:ALA:HA	3:A:158:ARG:HD2	1.72	0.70
4:C:1002:LEU:HD23	4:C:1007:LYS:HD3	1.73	0.70
4:C:61:SER:OG	4:C:65:ASN:N	2.25	0.70
4:C:1149:TYR:HB3	4:C:1159:VAL:CG1	2.22	0.70
4:C:1293:VAL:HG11	4:C:1304:MET:HG2	1.74	0.70
2:J:147:PRO:HD2	2:J:152:ASP:HA	1.74	0.70
5:D:194:LEU:HD21	5:D:234:PRO:HG3	1.74	0.70
5:D:1105:ALA:HB1	5:D:1122:ALA:HB1	1.73	0.70
7:F:141:ILE:O	7:F:145:LEU:N	2.22	0.70
3:B:65:LEU:HD22	3:B:169:GLY:HA3	1.72	0.70
1:H:12:DA:H1'	1:H:13:DT:H5'	1.74	0.69
4:C:97:ARG:HG3	4:C:121:GLU:HB3	1.73	0.69
7:F:144:LEU:HD11	7:F:161:LEU:HD12	1.73	0.69
5:D:1144:LEU:HD21	5:D:1236:GLU:HB2	1.75	0.69
8:G:3:DT:H1'	8:G:4:DG:H5'	1.75	0.69
3:A:208:ASN:ND2	3:A:210:THR:OG1	2.25	0.69
4:C:103:VAL:HG12	4:C:116:ASP:HB3	1.75	0.69
4:C:229:ILE:HG23	4:C:240:GLU:HB2	1.74	0.69
4:C:622:ASN:N	4:C:622:ASN:OD1	2.24	0.69
4:C:1083:GLU:OE1	4:C:1083:GLU:N	2.25	0.69
5:D:193:ASP:OD1	5:D:193:ASP:N	2.25	0.69
5:D:518:VAL:HG12	5:D:707:ILE:HD12	1.75	0.69
5:D:1025:MET:HB3	5:D:1124:ILE:HB	1.75	0.69
5:D:641:ILE:O	5:D:764:ARG:NH2	2.26	0.69
5:D:425:ARG:NH1	5:D:458:ASN:O	2.25	0.69
7:F:144:LEU:HA	7:F:147:GLN:HG2	1.74	0.69
2:J:118:ILE:HD11	2:J:171:LEU:HD11	1.74	0.68
5:D:1314:LEU:HB2	5:D:1326:GLN:HE22	1.58	0.68
7:F:336:GLU:HA	7:F:339:ARG:HG2	1.75	0.68
5:D:473:THR:OG1	5:D:474:LEU:N	2.26	0.68
5:D:510:LEU:O	5:D:514:THR:HG22	1.93	0.68
4:C:322:LEU:O	4:C:326:SER:N	2.25	0.68
4:C:452:ARG:NH2	4:C:584:TYR:O	2.25	0.68
7:F:460:ILE:HD13	7:F:501:ALA:HB2	1.76	0.68
7:F:574:GLU:O	7:F:578:LYS:NZ	2.27	0.68
3:A:190:ALA:HB2	3:A:200:LYS:HG3	1.76	0.68
5:D:73:GLY:O	5:D:76:LYS:NZ	2.26	0.68
5:D:972:LYS:HZ1	5:D:974:VAL:HG23	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:1037:PHE:HB3	5:D:1041:ILE:HD13	1.76	0.68
5:D:1267:VAL:N	5:D:1301:THR:O	2.24	0.68
4:C:236:LYS:HE2	4:C:236:LYS:HA	1.75	0.68
5:D:275:ARG:NH2	7:F:403:ASP:OD1	2.27	0.68
5:D:816:THR:HG22	5:D:818:GLU:H	1.58	0.68
7:F:147:GLN:OE1	7:F:150:ARG:NH2	2.26	0.68
4:C:255:ILE:HG21	4:C:263:VAL:HG23	1.76	0.67
4:C:820:GLU:HB2	4:C:1080:ASN:O	1.93	0.67
5:D:966:VAL:O	5:D:974:VAL:N	2.22	0.67
2:I:204:GLU:HA	2:I:207:MET:HE2	1.77	0.67
4:C:264:GLU:HB2	4:C:267:ARG:HD3	1.76	0.67
5:D:332:LYS:HB3	5:D:332:LYS:HZ2	1.60	0.67
2:J:82:ARG:NH2	5:D:91:GLU:OE1	2.28	0.67
2:J:132:LEU:HG	2:J:136:LEU:HD21	1.76	0.67
4:C:1297:ASP:OD2	4:C:1300:GLY:N	2.24	0.67
5:D:640:GLY:N	5:D:643:ASP:OD2	2.20	0.67
5:D:741:ALA:O	5:D:762:ASN:ND2	2.27	0.67
7:F:277:MET:O	7:F:281:ARG:N	2.24	0.67
5:D:205:LEU:HB2	5:D:217:LEU:HD12	1.75	0.67
3:B:101:THR:HG22	3:B:143:ARG:HD2	1.77	0.67
4:C:265:LYS:O	4:C:267:ARG:NH1	2.27	0.67
5:D:19:ALA:HA	5:D:1342:ASP:O	1.93	0.67
5:D:558:ASP:N	5:D:558:ASP:OD1	2.25	0.67
4:C:1254:VAL:O	5:D:99:ARG:NH2	2.27	0.67
4:C:1339:LEU:HB3	5:D:17:PHE:HD2	1.60	0.67
5:D:17:PHE:HZ	5:D:1353:VAL:HG11	1.60	0.67
5:D:210:SER:HB3	5:D:213:LYS:HB2	1.75	0.67
4:C:1017:GLN:O	4:C:1021:LEU:N	2.27	0.66
5:D:652:GLU:N	5:D:652:GLU:OE1	2.28	0.66
3:B:58:GLU:OE2	3:B:170:ARG:NH2	2.28	0.66
5:D:760:THR:O	5:D:760:THR:OG1	2.13	0.66
5:D:1002:VAL:N	5:D:1019:ASN:O	2.28	0.66
2:I:63:VAL:HG22	2:I:68:THR:HA	1.75	0.66
4:C:615:VAL:HG12	4:C:650:VAL:HA	1.77	0.66
5:D:1167:LYS:HG3	5:D:1174:ARG:HE	1.60	0.66
3:A:110:VAL:HG23	3:A:133:LEU:HD23	1.78	0.66
4:C:30:ILE:HG22	4:C:31:GLN:HG2	1.78	0.66
7:F:214:PRO:O	7:F:218:ARG:NE	2.24	0.66
2:I:82:ARG:HH21	7:F:578:LYS:HB3	1.60	0.66
4:C:321:LEU:HA	4:C:324:LYS:HB2	1.77	0.66
5:D:925:GLU:HG3	5:D:926:PRO:CD	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:155:ALA:N	3:B:174:ASP:OD1	2.25	0.66
1:H:63:DG:H5"	5:D:1170:LYS:HG2	1.77	0.66
2:I:126:ASP:O	2:I:130:LYS:N	2.26	0.66
3:A:191:ARG:NH2	3:A:196:THR:O	2.27	0.66
4:C:439:LYS:O	4:C:439:LYS:NZ	2.24	0.66
4:C:1009:ASN:O	4:C:1013:GLN:HB2	1.95	0.66
4:C:1290:MET:SD	4:C:1294:LYS:NZ	2.61	0.66
7:F:124:GLU:O	7:F:128:ASN:ND2	2.29	0.66
3:A:192:VAL:HG12	3:A:195:ARG:HB2	1.78	0.65
4:C:242:VAL:HG23	4:C:245:ARG:HB2	1.78	0.65
4:C:379:GLU:N	4:C:379:GLU:OE1	2.29	0.65
5:D:709:ARG:NH1	5:D:714:GLU:OE1	2.30	0.65
4:C:702:THR:O	4:C:702:THR:OG1	2.13	0.65
5:D:799:ARG:NH1	5:D:1146:GLU:OE2	2.29	0.65
2:J:169:PRO:HD3	2:J:208:ARG:NH2	2.12	0.65
3:B:41:ASN:OD1	3:B:44:ARG:NH2	2.30	0.65
5:D:704:GLU:HB2	5:D:718:SER:CB	2.26	0.65
5:D:959:LYS:HE3	5:D:985:ILE:HG13	1.78	0.65
5:D:1144:LEU:HD23	5:D:1237:VAL:HG23	1.77	0.65
5:D:968:ASN:ND2	5:D:970:SER:OG	2.27	0.65
4:C:189:ASP:HB2	4:C:190:PRO:HD2	1.79	0.65
4:C:633:LEU:HD12	4:C:644:LEU:HD12	1.78	0.65
4:C:1161:LEU:HD12	4:C:1161:LEU:O	1.96	0.65
5:D:1105:ALA:HA	5:D:1123:ARG:O	1.97	0.65
4:C:1267:GLY:HA3	5:D:347:VAL:O	1.97	0.65
5:D:1158:GLU:OE1	5:D:1158:GLU:N	2.30	0.65
7:F:404:LEU:HD22	7:F:439:ILE:HG23	1.79	0.65
1:H:44:DG:H1'	1:H:45:DA:H5'	1.79	0.65
4:C:632:ASP:OD1	4:C:632:ASP:N	2.29	0.65
4:C:839:VAL:HG12	4:C:1049:ILE:HG23	1.78	0.65
5:D:980:THR:CB	5:D:997:VAL:HB	2.26	0.65
6:E:3:ARG:HH21	6:E:52:ARG:HG3	1.60	0.65
1:H:14:DT:H5"	7:F:584:ARG:HD2	1.79	0.65
4:C:320:ASP:O	4:C:324:LYS:N	2.25	0.65
3:K:263:THR:O	3:K:267:ALA:N	2.29	0.64
3:B:61:ILE:HG21	3:B:64:VAL:HB	1.79	0.64
5:D:709:ARG:HH21	5:D:712:GLN:HB2	1.63	0.64
2:J:165:LEU:O	2:J:208:ARG:NH2	2.30	0.64
4:C:699:LEU:HB2	4:C:799:ASN:HD22	1.61	0.64
4:C:1021:LEU:O	4:C:1025:PHE:HB3	1.98	0.64
6:E:23:ALA:HB2	6:E:54:ILE:HD11	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:975:ILE:HG22	4:C:1010:GLN:HG2	1.80	0.64
4:C:716:ALA:HB3	4:C:784:ALA:HB3	1.78	0.64
5:D:703:THR:HG21	5:D:715:LYS:HD3	1.78	0.64
5:D:959:LYS:HG3	5:D:985:ILE:HG13	1.79	0.64
2:I:146:LYS:HG3	2:I:150:LEU:HA	1.79	0.64
3:B:83:LEU:HD11	5:D:527:LEU:O	1.98	0.64
4:C:299:LYS:HE2	4:C:334:GLU:OE1	1.97	0.64
5:D:314:ARG:HH22	5:D:323:PRO:HG3	1.62	0.64
5:D:507:VAL:HG21	5:D:598:LYS:HB2	1.78	0.64
5:D:528:THR:O	5:D:528:THR:OG1	2.11	0.64
3:B:135:ASP:OD1	3:B:136:GLU:N	2.30	0.64
5:D:1029:THR:HB	5:D:1118:GLY:H	1.62	0.64
2:I:96:ARG:NH2	2:J:81:GLU:OE2	2.30	0.64
4:C:545:PHE:CZ	5:D:781:LYS:HD3	2.32	0.64
4:C:836:LEU:HD21	4:C:921:PRO:HD3	1.80	0.64
5:D:850:LYS:HG3	5:D:855:ASP:HB3	1.78	0.64
7:F:341:LEU:HB3	7:F:344:LEU:HD21	1.80	0.64
2:I:18:THR:O	2:I:167:ARG:NH2	2.23	0.64
4:C:320:ASP:OD1	4:C:320:ASP:N	2.25	0.64
5:D:398:LYS:HD3	7:F:532:LEU:CD2	2.28	0.64
5:D:609:TYR:HE1	5:D:614:LEU:HD12	1.63	0.64
4:C:117:ILE:HD11	4:C:488:MET:HA	1.79	0.63
4:C:540:ARG:HH22	4:C:567:PRO:HG2	1.62	0.63
5:D:163:GLU:OE1	5:D:163:GLU:N	2.31	0.63
7:F:97:PRO:O	7:F:101:TYR:N	2.29	0.63
7:F:543:ALA:O	7:F:547:VAL:N	2.31	0.63
3:A:155:ALA:O	3:A:159:ILE:HG12	1.98	0.63
3:B:83:LEU:HD21	5:D:526:VAL:HG22	1.81	0.63
4:C:576:SER:OG	4:C:577:VAL:N	2.30	0.63
5:D:749:LYS:NZ	5:D:753:SER:OG	2.30	0.63
8:G:58:DG:H2'	8:G:59:DT:H71	1.79	0.63
3:B:100:LEU:HB2	3:B:144:ILE:CG1	2.29	0.63
4:C:335:THR:OG1	4:C:336:LEU:N	2.30	0.63
4:C:194:LEU:HB3	4:C:206:ALA:CB	2.28	0.63
4:C:557:ARG:NH2	4:C:611:GLU:OE1	2.25	0.63
5:D:978:ARG:HH12	5:D:999:TYR:HB2	1.63	0.63
7:F:283:GLN:HE22	7:F:340:ALA:HB1	1.63	0.63
2:I:6:ASN:HB3	2:I:65:ARG:HA	1.80	0.63
5:D:1152:GLU:OE1	5:D:1194:ARG:NH2	2.32	0.63
7:F:279:ARG:NH2	7:F:350:GLU:OE2	2.30	0.63
2:I:111:TYR:CE1	2:I:164:LEU:HD11	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:180:ARG:NH2	4:C:393:ASP:O	2.32	0.63
4:C:288:PRO:HG2	4:C:291:TYR:HB2	1.80	0.63
5:D:959:LYS:NZ	5:D:985:ILE:HG21	2.14	0.63
7:F:150:ARG:HD2	7:F:155:GLU:OE1	1.99	0.63
4:C:1004:ASP:OD1	4:C:1008:GLN:NE2	2.32	0.63
1:H:42:DG:H2"	1:H:43:DG:OP2	1.98	0.62
1:H:59:DC:H1'	1:H:60:DA:H5'	1.81	0.62
4:C:441:GLU:OE1	4:C:442:VAL:N	2.32	0.62
4:C:1142:ARG:HD3	4:C:1169:VAL:HG21	1.80	0.62
4:C:1338:GLU:O	4:C:1339:LEU:HD23	1.98	0.62
5:D:1280:VAL:HG11	5:D:1304:ARG:HH21	1.63	0.62
7:F:131:GLN:HB3	7:F:266:PHE:HZ	1.64	0.62
2:I:11:MET:SD	2:I:37:GLU:N	2.66	0.62
2:I:20:ILE:HD11	2:I:163:PRO:HB2	1.81	0.62
2:I:41:VAL:CG1	2:I:47:PRO:HD3	2.28	0.62
2:J:118:ILE:CD1	2:J:171:LEU:HD11	2.29	0.62
5:D:716:GLN:HG3	5:D:717:VAL:O	1.99	0.62
5:D:885:VAL:HG11	5:D:1255:VAL:HG12	1.81	0.62
6:E:75:GLN:O	6:E:79:GLU:N	2.32	0.62
7:F:163:THR:HG23	7:F:262:VAL:HG22	1.81	0.62
3:B:214:GLU:OE2	3:B:218:ARG:NH2	2.25	0.62
4:C:12:ARG:NH2	4:C:793:GLU:OE2	2.27	0.62
4:C:193:ASN:HB3	4:C:350:THR:HG22	1.81	0.62
5:D:694:SER:OG	5:D:738:ARG:NE	2.32	0.62
5:D:803:VAL:HG11	5:D:1309:ILE:HG22	1.80	0.62
7:F:228:TYR:CD2	7:F:229:VAL:HG13	2.34	0.62
5:D:611:ILE:HG22	5:D:612:LEU:HD12	1.80	0.62
5:D:255:LEU:HD23	5:D:261:ALA:HB2	1.82	0.62
5:D:1004:ALA:HB3	5:D:1017:VAL:HA	1.81	0.62
7:F:141:ILE:HG22	7:F:145:LEU:HB3	1.80	0.62
8:G:52:DC:H5'	8:G:52:DC:H6	1.62	0.62
2:J:154:PHE:CE1	2:J:158:ASP:HB2	2.34	0.62
3:A:222:THR:HG22	3:B:232:VAL:HA	1.82	0.62
4:C:866:ASP:HB3	4:C:872:TYR:CE1	2.34	0.62
8:G:11:DT:H2"	8:G:12:DG:H5"	1.82	0.62
1:H:42:DG:C2'	1:H:43:DG:O4'	2.47	0.62
4:C:494:ASN:OD1	7:F:468:ARG:NE	2.33	0.62
4:C:662:SER:OG	4:C:663:VAL:N	2.31	0.62
5:D:83:VAL:O	5:D:92:VAL:HG22	2.00	0.62
5:D:807:LEU:HD12	5:D:1259:GLN:OE1	2.00	0.62
7:F:347:ILE:HA	7:F:350:GLU:HB2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:453:ILE:HD12	4:C:587:LEU:HD21	1.82	0.62
4:C:1134:GLN:O	4:C:1135:GLN:HG2	2.00	0.62
5:D:474:LEU:HD11	6:E:47:THR:HG22	1.82	0.62
5:D:801:VAL:CG2	5:D:917:VAL:HG13	2.28	0.62
5:D:860:ARG:O	5:D:862:THR:HG23	2.00	0.62
5:D:1027:VAL:O	5:D:1121:LEU:N	2.29	0.62
7:F:354:THR:HG22	7:F:357:GLN:HG3	1.82	0.62
7:F:479:THR:OG1	7:F:482:GLU:HG3	2.00	0.62
5:D:44:ILE:HD11	7:F:450:ILE:HD11	1.80	0.62
5:D:163:GLU:O	5:D:167:ASP:N	2.26	0.62
5:D:857:LEU:HD12	5:D:858:VAL:HG13	1.82	0.62
7:F:160:ASP:O	7:F:265:GLN:NE2	2.29	0.62
7:F:160:ASP:HA	7:F:262:VAL:HG11	1.80	0.62
7:F:305:LEU:O	7:F:314:THR:HG21	2.00	0.62
7:F:247:GLU:O	7:F:251:LYS:N	2.32	0.62
7:F:250:LEU:O	7:F:254:GLU:N	2.31	0.62
2:J:14:PHE:CD2	2:J:50:LEU:HD13	2.34	0.61
2:J:22:SER:O	2:J:26:ARG:HG3	2.00	0.61
3:K:264:VAL:O	3:K:268:ASN:N	2.32	0.61
3:B:222:THR:O	3:B:226:GLU:HG2	2.00	0.61
4:C:373:GLY:HA3	7:F:94:THR:HB	1.82	0.61
5:D:800:LEU:HD22	5:D:1256:ILE:HD13	1.82	0.61
2:I:169:PRO:HG2	2:I:208:ARG:HH12	1.64	0.61
3:B:86:LYS:HE2	3:B:174:ASP:HB2	1.83	0.61
4:C:667:LEU:HA	4:C:702:THR:HG21	1.81	0.61
4:C:453:ILE:HD11	4:C:587:LEU:HD11	1.82	0.61
7:F:565:ILE:O	7:F:567:MET:HG2	2.00	0.61
7:F:585:GLU:CG	7:F:588:ARG:HD2	2.31	0.61
3:B:159:ILE:HD12	3:B:162:GLU:HB2	1.83	0.61
4:C:119:GLU:HB2	4:C:489:PRO:HD2	1.82	0.61
4:C:245:ARG:HG3	4:C:337:PHE:CZ	2.36	0.61
5:D:381:ILE:HD11	5:D:412:LEU:HB2	1.82	0.61
5:D:982:LEU:HD21	5:D:997:VAL:HG21	1.82	0.61
8:G:32:DA:H2"	8:G:33:DA:H5'	1.82	0.61
4:C:77:GLU:OE1	4:C:77:GLU:N	2.30	0.61
5:D:334:LYS:O	5:D:335:GLN:NE2	2.33	0.61
5:D:1175:LEU:HD12	5:D:1176:VAL:H	1.64	0.61
4:C:1243:MET:HE3	5:D:445:LYS:HB3	1.83	0.61
3:A:11:PRO:HA	3:A:30:PRO:HD2	1.83	0.61
3:A:57:THR:HG21	3:A:147:GLN:HE21	1.64	0.61
4:C:298:ALA:HB3	4:C:299:LYS:HZ1	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:1012:ALA:HB3	5:D:1015:GLU:HB2	1.83	0.61
5:D:1055:GLY:O	5:D:1108:GLN:HB2	2.01	0.61
3:A:51:MET:HE1	3:A:216:ALA:HA	1.83	0.61
5:D:210:SER:O	5:D:214:ARG:HG2	2.01	0.61
5:D:1111:ASP:OD1	5:D:1112:GLY:N	2.34	0.61
7:F:136:GLU:HG3	7:F:361:ILE:HG12	1.83	0.61
4:C:155:VAL:HG12	4:C:176:ILE:HG12	1.83	0.61
4:C:690:VAL:CG2	4:C:1236:ASN:HB3	2.31	0.61
5:D:62:PHE:CD1	5:D:247:PRO:HD3	2.36	0.61
7:F:150:ARG:O	7:F:154:GLU:N	2.33	0.61
7:F:329:LYS:O	7:F:329:LYS:HD3	2.01	0.61
3:B:170:ARG:HH11	3:B:170:ARG:HA	1.65	0.60
4:C:817:LEU:HD21	4:C:1080:ASN:HD21	1.66	0.60
5:D:948:SER:HA	5:D:1022:PRO:HG3	1.83	0.60
8:G:55:DT:H2'	8:G:56:DT:C2	2.35	0.60
2:J:162:ALA:HB3	2:J:163:PRO:HD3	1.83	0.60
3:A:74:VAL:HG23	3:A:76:GLU:H	1.67	0.60
4:C:268:ARG:NH2	4:C:270:THR:HA	2.16	0.60
4:C:336:LEU:O	4:C:338:THR:HG22	2.00	0.60
5:D:490:ILE:O	5:D:491:LEU:HD23	2.01	0.60
5:D:1062:LEU:HB2	5:D:1067:ARG:HE	1.64	0.60
2:I:174:GLU:OE1	2:I:175:PHE:N	2.32	0.60
2:J:166:TRP:NE1	2:J:204:GLU:O	2.28	0.60
4:C:321:LEU:HD23	4:C:324:LYS:HD2	1.81	0.60
4:C:546:GLU:HG2	4:C:547:VAL:HG13	1.82	0.60
5:D:806:ASP:OD1	5:D:806:ASP:N	2.30	0.60
7:F:277:MET:O	7:F:280:VAL:N	2.33	0.60
1:H:19:DA:H2"	1:H:20:DA:H5"	1.83	0.60
1:H:42:DG:O6	7:F:106:GLY:CA	2.31	0.60
2:J:168:LEU:HB2	2:J:169:PRO:HD3	1.82	0.60
5:D:297:ARG:HH11	7:F:100:MET:HE2	1.65	0.60
5:D:516:ASP:OD1	5:D:516:ASP:N	2.34	0.60
4:C:538:LEU:HD21	4:C:547:VAL:HG21	1.83	0.60
5:D:1155:ILE:HG12	5:D:1211:SER:HB3	1.83	0.60
2:J:129:ARG:HA	2:J:173:ILE:HD11	1.83	0.60
4:C:757:THR:HG23	4:C:765:ILE:HG23	1.82	0.60
5:D:557:LYS:HA	5:D:562:GLU:O	2.01	0.60
5:D:1025:MET:N	5:D:1124:ILE:O	2.34	0.60
2:I:202:GLU:N	2:I:202:GLU:OE1	2.35	0.60
5:D:975:ILE:HG12	5:D:998:PRO:O	2.02	0.60
7:F:109:GLU:OE1	7:F:109:GLU:N	2.29	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:134:ASP:OD1	5:D:159:ILE:HG12	2.02	0.60
5:D:514:THR:HG21	5:D:596:LEU:HB3	1.84	0.60
5:D:847:ASP:OD1	5:D:860:ARG:HA	2.01	0.60
7:F:127:ILE:O	7:F:131:GLN:HG3	2.02	0.60
2:J:191:PHE:HA	2:J:196:PHE:HD2	1.66	0.60
3:B:54:CYS:SG	3:B:148:ARG:HG2	2.41	0.60
5:D:534:GLU:HA	5:D:578:ILE:HD11	1.84	0.60
5:D:978:ARG:HH22	5:D:999:TYR:HB2	1.67	0.60
7:F:320:ILE:HG12	7:F:327:SER:O	2.02	0.60
2:I:10:VAL:HG12	2:I:11:MET:H	1.67	0.60
4:C:415:GLU:OE1	4:C:415:GLU:N	2.30	0.60
4:C:979:LEU:HD11	4:C:1011:LEU:HD21	1.84	0.60
3:A:118:ASP:OD1	3:A:119:GLY:N	2.35	0.59
4:C:288:PRO:HG2	4:C:291:TYR:CB	2.32	0.59
4:C:775:GLU:OE1	4:C:775:GLU:N	2.35	0.59
5:D:443:GLU:OE2	5:D:444:GLY:N	2.33	0.59
5:D:960:LEU:HD22	5:D:981:GLU:O	2.02	0.59
7:F:138:PRO:HG2	7:F:353:LEU:HD11	1.84	0.59
8:G:47:DT:C2'	8:G:48:DC:H5'	2.28	0.59
2:I:124:GLU:HA	2:I:127:ALA:HB3	1.84	0.59
3:A:14:VAL:HG12	3:A:27:THR:O	2.00	0.59
4:C:1006:GLU:HA	4:C:1009:ASN:HB2	1.83	0.59
4:C:1164:PHE:HB2	4:C:1168:GLU:CB	2.32	0.59
5:D:450:HIS:NE2	5:D:625:MET:SD	2.76	0.59
5:D:1025:MET:HB3	5:D:1124:ILE:CG2	2.32	0.59
2:I:88:LEU:HD13	2:I:156:LEU:HD21	1.82	0.59
4:C:988:LYS:HA	4:C:991:LYS:HG2	1.84	0.59
2:I:93:PRO:HD2	5:D:82:GLY:HA3	1.85	0.59
4:C:262:TYR:HE2	4:C:282:VAL:HG21	1.67	0.59
5:D:232:ASN:OD1	5:D:232:ASN:N	2.33	0.59
5:D:808:VAL:HG21	5:D:1359:ALA:HB2	1.83	0.59
5:D:1073:ASP:O	5:D:1074:LEU:HD23	2.03	0.59
7:F:298:PRO:HB2	7:F:301:ASN:HD21	1.67	0.59
2:I:27:ILE:HD11	2:I:163:PRO:HG3	1.83	0.59
3:B:135:ASP:O	3:B:137:ASN:ND2	2.35	0.59
4:C:98:VAL:O	4:C:121:GLU:HA	2.01	0.59
5:D:955:LYS:HG2	5:D:1010:GLN:HB3	1.84	0.59
5:D:1088:VAL:O	5:D:1097:ALA:N	2.25	0.59
7:F:146:GLU:O	7:F:150:ARG:NE	2.35	0.59
7:F:572:THR:HG23	8:G:45:DT:OP2	2.02	0.59
1:H:19:DA:H2"	1:H:20:DA:C5'	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:104:LYS:NZ	3:B:105:SER:O	2.31	0.59
2:J:29:LEU:HG	2:J:34:VAL:HG11	1.84	0.59
4:C:857:VAL:HG11	4:C:862:LEU:HD21	1.85	0.59
7:F:144:LEU:HA	7:F:147:GLN:CG	2.32	0.59
2:I:104:HIS:CE1	2:J:71:GLU:HG3	2.38	0.59
3:A:26:VAL:HG21	3:A:217:ILE:HD12	1.85	0.59
4:C:940:GLU:OE1	4:C:940:GLU:N	2.36	0.59
2:I:104:HIS:NE2	2:J:71:GLU:HG3	2.18	0.59
4:C:230:PHE:HB2	4:C:333:ILE:HB	1.85	0.59
4:C:232:ILE:O	4:C:331:LYS:HD3	2.02	0.59
4:C:243:PRO:HB3	4:C:277:LEU:HB2	1.83	0.59
4:C:324:LYS:O	4:C:328:SER:HB2	2.02	0.59
7:F:113:ARG:HB2	7:F:426:LYS:HE2	1.84	0.59
2:J:28:VAL:O	2:J:32:LYS:HG2	2.03	0.59
2:J:23:HIS:O	2:J:27:ILE:HG12	2.03	0.58
3:A:100:LEU:HD21	3:A:121:VAL:HG11	1.85	0.58
3:B:98:VAL:HG13	3:B:146:VAL:HG13	1.85	0.58
7:F:142:THR:HA	7:F:145:LEU:CD2	2.34	0.58
7:F:166:VAL:HG12	7:F:260:ARG:NH2	2.17	0.58
1:H:55:DG:H2"	1:H:56:DA:H5"	1.85	0.58
2:J:15:SER:O	2:J:41:VAL:HG13	2.02	0.58
4:C:225:PHE:HE2	4:C:347:ILE:HG22	1.68	0.58
4:C:471:VAL:O	4:C:475:VAL:HG12	2.03	0.58
4:C:1020:GLU:O	4:C:1024:GLU:N	2.25	0.58
5:D:140:TYR:HB3	7:F:100:MET:HE1	1.83	0.58
5:D:390:LEU:HD23	5:D:407:VAL:HG11	1.85	0.58
2:I:5:ALA:HB1	2:I:12:THR:HG21	1.85	0.58
5:D:152:THR:HG22	5:D:153:ASN:H	1.68	0.58
5:D:208:THR:CG2	5:D:213:LYS:HE3	2.34	0.58
5:D:1286:LYS:O	5:D:1290:ARG:N	2.27	0.58
3:A:27:THR:CG2	3:A:200:LYS:HE3	2.32	0.58
7:F:150:ARG:HB3	7:F:155:GLU:HB3	1.85	0.58
3:A:179:PRO:HA	3:A:208:ASN:OD1	2.02	0.58
4:C:1005:GLU:O	4:C:1008:GLN:HG3	2.03	0.58
5:D:120:LEU:HB2	5:D:121:PRO:HD3	1.86	0.58
5:D:697:MET:SD	5:D:741:ALA:HB3	2.43	0.58
5:D:825:VAL:CG1	5:D:832:LYS:HB2	2.33	0.58
5:D:975:ILE:HD11	5:D:977:SER:O	2.04	0.58
6:E:67:ARG:NH1	6:E:67:ARG:O	2.36	0.58
8:G:38:DA:H2'	8:G:39:DC:C6	2.38	0.58
2:J:154:PHE:HE1	2:J:158:ASP:HB2	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:194:ASP:HA	2:J:197:LEU:HB3	1.84	0.58
4:C:38:PHE:HD2	4:C:39:ILE:HG23	1.69	0.58
4:C:230:PHE:CE2	4:C:292:ILE:HD12	2.39	0.58
5:D:843:VAL:HG21	5:D:883:ARG:HD3	1.85	0.58
2:I:182:GLU:N	2:I:182:GLU:OE1	2.36	0.58
2:J:20:ILE:O	2:J:24:GLN:HG3	2.02	0.58
5:D:127:LEU:HD22	5:D:227:PHE:HE1	1.69	0.58
5:D:1038:THR:HG21	5:D:1079:LYS:HB2	1.85	0.58
8:G:36:DT:H2"	8:G:37:DA:H5'	1.85	0.58
3:A:14:VAL:CG1	3:A:27:THR:HB	2.32	0.58
4:C:1008:GLN:HA	4:C:1011:LEU:CD1	2.34	0.58
5:D:1215:GLU:OE1	5:D:1215:GLU:N	2.37	0.58
2:J:129:ARG:NH2	2:J:171:LEU:O	2.37	0.58
4:C:242:VAL:CG2	4:C:245:ARG:HB2	2.34	0.58
4:C:473:ARG:HB2	4:C:473:ARG:NH1	2.19	0.58
4:C:979:LEU:CD1	4:C:1011:LEU:HD21	2.34	0.58
5:D:320:ASN:O	5:D:321:LYS:HD3	2.03	0.58
7:F:159:SER:O	7:F:262:VAL:HG21	2.03	0.58
1:H:18:DA:H1'	1:H:19:DA:H5'	1.85	0.58
3:B:161:SER:O	3:B:163:GLU:HG3	2.04	0.58
4:C:301:TYR:HB2	4:C:311:CYS:SG	2.44	0.58
4:C:578:TYR:HD2	4:C:659:GLN:HB2	1.68	0.58
5:D:317:THR:CG2	5:D:320:ASN:HB3	2.33	0.58
5:D:1029:THR:CG2	5:D:1117:SER:HA	2.34	0.58
8:G:41:DC:H2"	8:G:42:DT:N3	2.19	0.58
3:B:170:ARG:HA	3:B:170:ARG:NH1	2.18	0.57
2:I:25:VAL:O	2:I:29:LEU:HB2	2.04	0.57
3:B:57:THR:O	3:B:173:VAL:HG12	2.02	0.57
4:C:397:LEU:O	4:C:398:SER:OG	2.20	0.57
4:C:897:PRO:HG2	4:C:898:GLU:OE1	2.04	0.57
5:D:426:ALA:HB3	5:D:427:PRO:HD3	1.86	0.57
5:D:519:ASN:HA	5:D:523:GLU:OE1	2.04	0.57
5:D:718:SER:OG	5:D:719:PHE:N	2.35	0.57
7:F:558:VAL:HG23	7:F:580:PHE:HE2	1.69	0.57
2:I:94:VAL:HG13	2:J:67:LEU:HD22	1.86	0.57
2:J:90:PRO:HG2	2:J:96:ARG:HA	1.86	0.57
5:D:38:VAL:HG11	5:D:56:LEU:HD12	1.84	0.57
5:D:1005:LYS:HG3	5:D:1011:VAL:HG22	1.86	0.57
6:E:76:GLU:HA	6:E:79:GLU:HG3	1.86	0.57
7:F:214:PRO:HB2	7:F:218:ARG:HD3	1.86	0.57
4:C:58:PRO:HB3	4:C:69:GLN:HA	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:1022:LYS:O	4:C:1026:GLU:HB3	2.05	0.57
5:D:1027:VAL:HB	5:D:1121:LEU:HB2	1.87	0.57
5:D:1161:GLY:HA2	5:D:1180:VAL:HG22	1.86	0.57
7:F:558:VAL:HG21	7:F:587:ILE:HD11	1.87	0.57
1:H:11:DG:N2	8:G:53:DA:N3	2.53	0.57
2:J:17:PRO:HD3	2:J:41:VAL:CG2	2.35	0.57
2:J:41:VAL:HG11	2:J:59:VAL:HG11	1.86	0.57
2:J:99:SER:O	2:J:103:MET:HG2	2.03	0.57
3:A:11:PRO:HB3	3:A:31:LEU:HD23	1.86	0.57
4:C:102:LEU:HB2	4:C:489:PRO:HG3	1.87	0.57
4:C:248:GLY:H	4:C:269:ILE:HD11	1.69	0.57
4:C:471:VAL:CB	4:C:498:ILE:HD11	2.33	0.57
5:D:388:ARG:HB2	5:D:390:LEU:HD13	1.86	0.57
5:D:1031:VAL:O	5:D:1080:ILE:HD13	2.04	0.57
4:C:164:THR:HG21	4:C:171:LEU:CD1	2.34	0.57
4:C:672:GLU:HB3	4:C:1187:PHE:CD1	2.40	0.57
5:D:218:THR:HA	5:D:221:ILE:CG2	2.35	0.57
3:A:100:LEU:HD13	3:A:115:ILE:HG21	1.84	0.57
4:C:208:ILE:HD11	4:C:365:GLU:HG2	1.86	0.57
4:C:826:ASP:OD1	4:C:829:THR:HB	2.05	0.57
4:C:979:LEU:CG	4:C:1002:LEU:HD22	2.33	0.57
5:D:134:ASP:O	5:D:138:VAL:HG23	2.04	0.57
5:D:1021:ASP:HB3	5:D:1024:THR:O	2.04	0.57
5:D:1095:MET:HG3	5:D:1096:PRO:O	2.04	0.57
7:F:145:LEU:HD22	7:F:228:TYR:OH	2.05	0.57
7:F:158:LEU:HD23	7:F:158:LEU:H	1.69	0.57
7:F:267:ASP:O	7:F:270:VAL:HG22	2.05	0.57
2:I:140:ALA:HB3	2:I:141:PRO:HD3	1.87	0.57
2:I:170:GLN:HG3	2:I:171:LEU:CD2	2.34	0.57
2:J:90:PRO:HD2	2:J:96:ARG:HG2	1.84	0.57
3:B:80:GLU:OE1	5:D:569:LEU:HD21	2.05	0.57
3:A:38:THR:OG1	3:B:45:ARG:HD3	2.05	0.57
4:C:993:PRO:CG	4:C:996:ARG:HB3	2.26	0.57
5:D:155:GLU:OE1	5:D:158:GLN:NE2	2.27	0.57
5:D:751:ASP:OD1	5:D:751:ASP:N	2.37	0.57
7:F:139:GLU:O	7:F:142:THR:OG1	2.22	0.57
7:F:224:LEU:HD11	7:F:252:LEU:CD1	2.34	0.57
7:F:335:GLU:O	7:F:339:ARG:N	2.37	0.57
2:I:62:LEU:HD12	2:I:63:VAL:H	1.70	0.57
3:B:28:LEU:HD12	3:B:29:GLU:H	1.70	0.57
4:C:117:ILE:HD11	4:C:489:PRO:HD3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:263:VAL:HG12	4:C:264:GLU:H	1.70	0.57
5:D:836:ARG:NH1	5:D:837:ASP:OD1	2.37	0.57
5:D:930:LEU:HD22	5:D:1244:GLN:HB3	1.86	0.57
5:D:1042:ASP:OD2	5:D:1048:ARG:HD2	2.05	0.57
7:F:487:MET:O	7:F:488:LEU:HD22	2.05	0.57
2:I:21:TYR:HB3	2:I:60:PRO:CD	2.34	0.56
2:J:25:VAL:HG12	2:J:29:LEU:HD13	1.87	0.56
2:J:155:SER:OG	2:J:157:VAL:HG12	2.05	0.56
6:E:56:GLU:HB3	6:E:58:LEU:CD1	2.31	0.56
7:F:166:VAL:HG12	7:F:260:ARG:HH21	1.70	0.56
7:F:572:THR:O	7:F:576:VAL:HG23	2.05	0.56
3:A:181:GLU:OE2	3:A:208:ASN:HB3	2.05	0.56
3:B:102:LEU:O	3:B:141:SER:HA	2.05	0.56
4:C:38:PHE:CD2	4:C:39:ILE:HG23	2.40	0.56
5:D:847:ASP:OD1	5:D:847:ASP:N	2.38	0.56
5:D:1036:ARG:HD2	5:D:1079:LYS:HD2	1.86	0.56
2:J:112:THR:HG23	2:J:115:ASN:HD22	1.70	0.56
3:K:307:LEU:HD12	3:K:308:ALA:N	2.20	0.56
4:C:1001:GLY:HA2	4:C:1011:LEU:HD13	1.88	0.56
5:D:423:LEU:HD23	5:D:466:MET:HE1	1.87	0.56
5:D:1005:LYS:NZ	5:D:1011:VAL:HA	2.19	0.56
5:D:1037:PHE:HB3	5:D:1041:ILE:CD1	2.36	0.56
5:D:1060:VAL:HA	5:D:1105:ALA:O	2.04	0.56
7:F:128:ASN:OD1	7:F:131:GLN:NE2	2.39	0.56
7:F:511:ILE:HD11	7:F:517:SER:OG	2.06	0.56
7:F:593:LYS:HA	7:F:596:ARG:NH1	2.20	0.56
1:H:38:DT:C2'	7:F:429:THR:HG21	2.36	0.56
3:K:302:GLU:OE1	3:K:302:GLU:N	2.38	0.56
4:C:98:VAL:HG21	4:C:124:MET:SD	2.45	0.56
5:D:795:TYR:CZ	5:D:799:ARG:HD3	2.41	0.56
5:D:902:ASP:OD1	5:D:903:LEU:N	2.39	0.56
5:D:984:LEU:O	5:D:992:LYS:HB2	2.05	0.56
5:D:1109:LEU:HD21	5:D:1115:ILE:HG21	1.87	0.56
7:F:244:THR:OG1	7:F:247:GLU:HB2	2.05	0.56
7:F:278:ASP:O	7:F:282:THR:HG22	2.05	0.56
2:J:71:GLU:OE1	2:J:73:ARG:HB3	2.04	0.56
3:B:65:LEU:HD22	3:B:168:ILE:O	2.05	0.56
4:C:1124:ILE:HG21	4:C:1180:MET:CE	2.36	0.56
5:D:287:ALA:HB1	5:D:288:PRO:HD2	1.87	0.56
5:D:813:ASP:OD2	5:D:897:HIS:ND1	2.39	0.56
7:F:284:GLU:HA	7:F:287:ILE:CD1	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:37:DA:OP1	1:H:37:DA:H2'	2.04	0.56
2:J:148:TYR:HB3	2:J:158:ASP:OD2	2.06	0.56
4:C:865:LEU:HD23	4:C:865:LEU:H	1.71	0.56
1:H:40:DA:OP2	7:F:428:SER:HB2	2.06	0.56
3:A:155:ALA:HA	3:A:158:ARG:CD	2.34	0.56
5:D:707:ILE:HD11	5:D:716:GLN:HE22	1.71	0.56
5:D:870:ASP:HA	5:D:873:GLU:HB3	1.87	0.56
7:F:128:ASN:HA	7:F:131:GLN:NE2	2.20	0.56
7:F:333:VAL:O	7:F:337:VAL:HG22	2.06	0.56
7:F:572:THR:HB	7:F:575:GLU:HB3	1.87	0.56
1:H:18:DA:C1'	1:H:19:DA:H5'	2.35	0.56
1:H:61:DG:H1'	1:H:62:DG:C8	2.40	0.56
4:C:274:ILE:HA	4:C:277:LEU:CD1	2.36	0.56
4:C:324:LYS:HA	4:C:327:GLN:HE21	1.71	0.56
4:C:516:VAL:HG12	4:C:522:SER:OG	2.06	0.56
5:D:235:GLU:OE1	5:D:235:GLU:N	2.28	0.56
5:D:798:ARG:HD2	5:D:798:ARG:O	2.05	0.56
5:D:1256:ILE:O	5:D:1260:MET:HB2	2.06	0.56
2:I:36:PHE:CE1	2:I:38:ILE:HG22	2.41	0.56
4:C:896:THR:HB	4:C:897:PRO:HD2	1.87	0.56
4:C:1339:LEU:HB3	5:D:17:PHE:CD2	2.40	0.56
5:D:870:ASP:O	5:D:874:GLU:HG3	2.06	0.56
5:D:929:GLN:O	5:D:930:LEU:HD23	2.05	0.56
6:E:76:GLU:HA	6:E:79:GLU:CB	2.33	0.56
7:F:246:GLN:O	7:F:250:LEU:HB2	2.05	0.56
3:A:41:ASN:ND2	4:C:1217:THR:O	2.39	0.56
3:A:61:ILE:HB	3:A:64:VAL:CG1	2.36	0.56
5:D:165:TYR:O	5:D:169:LEU:N	2.39	0.56
5:D:273:ILE:O	5:D:277:ASN:HB2	2.05	0.56
5:D:1272:SER:OG	5:D:1286:LYS:NZ	2.39	0.56
7:F:489:MET:HB2	7:F:494:ILE:HG13	1.88	0.56
2:I:24:GLN:OE1	2:I:160:TYR:HA	2.06	0.55
2:J:41:VAL:HB	2:J:46:PRO:N	2.20	0.55
3:A:14:VAL:HG22	3:A:15:ASP:H	1.70	0.55
3:B:107:ILE:HD13	3:B:135:ASP:HA	1.88	0.55
3:B:162:GLU:HG3	3:B:166:ARG:HH22	1.72	0.55
7:F:525:ASP:OD2	7:F:528:LEU:HD13	2.05	0.55
7:F:572:THR:HB	7:F:575:GLU:CB	2.35	0.55
4:C:1305:TYR:O	4:C:1309:VAL:HG13	2.06	0.55
6:E:32:VAL:O	6:E:34:GLY:N	2.38	0.55
7:F:336:GLU:HA	7:F:339:ARG:CG	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:G:40:DA:H2'	8:G:41:DC:C2	2.42	0.55
2:J:184:LYS:O	2:J:188:THR:HG22	2.06	0.55
2:J:201:THR:O	2:J:205:ARG:HG3	2.05	0.55
3:B:69:SER:OG	3:B:70:THR:N	2.39	0.55
3:B:105:SER:CB	3:B:138:ALA:HB1	2.32	0.55
4:C:81:ASP:HB2	4:C:84:GLU:OE1	2.05	0.55
4:C:268:ARG:NH2	4:C:269:ILE:O	2.39	0.55
4:C:297:VAL:HG13	4:C:313:ALA:HA	1.88	0.55
4:C:393:ASP:OD1	4:C:393:ASP:N	2.21	0.55
4:C:1020:GLU:O	4:C:1024:GLU:HG2	2.06	0.55
4:C:1034:ARG:NH1	4:C:1034:ARG:HB2	2.21	0.55
4:C:1340:GLU:HG2	5:D:19:ALA:O	2.06	0.55
5:D:707:ILE:HD11	5:D:716:GLN:NE2	2.21	0.55
5:D:1081:VAL:HG12	5:D:1086:ASN:O	2.07	0.55
6:E:71:GLU:O	6:E:75:GLN:N	2.36	0.55
1:H:36:DT:O4	7:F:437:GLN:HB2	2.07	0.55
4:C:982:GLY:HA3	4:C:1002:LEU:HG	1.89	0.55
5:D:709:ARG:HD2	5:D:714:GLU:OE1	2.06	0.55
5:D:1109:LEU:HD12	5:D:1121:LEU:HD22	1.87	0.55
7:F:108:VAL:HG21	7:F:381:GLU:O	2.06	0.55
7:F:136:GLU:O	7:F:138:PRO:HD3	2.07	0.55
2:J:145:GLN:O	2:J:146:LYS:HD2	2.06	0.55
3:A:222:THR:HG22	3:B:232:VAL:CB	2.37	0.55
3:B:47:LEU:HD12	3:B:183:ILE:CD1	2.28	0.55
3:B:100:LEU:HB2	3:B:144:ILE:HG12	1.89	0.55
4:C:634:VAL:O	4:C:644:LEU:HD13	2.07	0.55
4:C:772:SER:N	4:C:775:GLU:OE2	2.36	0.55
3:B:205:MET:HE1	3:B:217:ILE:HG13	1.87	0.55
4:C:66:SER:O	4:C:479:LEU:HD21	2.07	0.55
4:C:192:ASP:HB3	4:C:346:TYR:CD1	2.42	0.55
4:C:589:THR:HG22	4:C:590:PRO:HD2	1.87	0.55
4:C:596:ASP:N	4:C:596:ASP:OD1	2.40	0.55
4:C:632:ASP:O	4:C:647:ARG:N	2.40	0.55
5:D:72:CYS:SG	5:D:73:GLY:N	2.79	0.55
5:D:527:LEU:HD12	5:D:532:GLU:HG2	1.87	0.55
5:D:742:GLY:O	5:D:762:ASN:HB3	2.07	0.55
5:D:1020:TRP:O	5:D:1022:PRO:HD3	2.06	0.55
3:A:224:LEU:HD23	3:B:228:LEU:HD11	1.88	0.55
5:D:1040:MET:SD	5:D:1078:LEU:HG	2.47	0.55
5:D:1080:ILE:HD12	5:D:1097:ALA:HB1	1.88	0.55
7:F:219:GLU:O	7:F:223:GLU:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:67:GLU:HB3	4:C:103:VAL:CG2	2.37	0.55
4:C:102:LEU:CB	4:C:489:PRO:HG3	2.37	0.55
4:C:294:GLY:O	4:C:295:LYS:HD3	2.06	0.55
5:D:94:GLN:O	5:D:97:VAL:HG12	2.07	0.55
5:D:399:LYS:O	5:D:403:ARG:HG3	2.07	0.55
5:D:489:ASN:OD1	5:D:489:ASN:N	2.38	0.55
5:D:857:LEU:HD11	5:D:872:LEU:HD21	1.89	0.55
5:D:872:LEU:HD13	5:D:877:VAL:HG11	1.88	0.55
6:E:23:ALA:HB2	6:E:54:ILE:CD1	2.37	0.55
7:F:135:ALA:HB2	7:F:256:PHE:HD2	1.71	0.55
3:B:107:ILE:HG12	3:B:134:THR:O	2.07	0.55
4:C:646:SER:OG	4:C:649:GLN:HB2	2.07	0.55
5:D:1025:MET:O	5:D:1124:ILE:HD13	2.07	0.55
5:D:1282:TYR:O	5:D:1286:LYS:HG3	2.07	0.55
7:F:231:THR:HB	7:F:248:GLU:O	2.07	0.55
7:F:456:MET:CE	7:F:497:VAL:HG22	2.36	0.55
3:B:107:ILE:CD1	3:B:135:ASP:HA	2.37	0.55
5:D:120:LEU:HD11	8:G:10:DG:H4'	1.89	0.55
5:D:140:TYR:HB3	7:F:100:MET:CE	2.37	0.55
5:D:1001:ALA:HA	5:D:1020:TRP:HA	1.88	0.55
5:D:1314:LEU:HB2	5:D:1326:GLN:NE2	2.22	0.55
2:J:137:LEU:HA	2:J:140:ALA:HB2	1.88	0.54
4:C:413:GLU:OE1	4:C:413:GLU:N	2.38	0.54
4:C:1124:ILE:HG21	4:C:1180:MET:HE3	1.89	0.54
5:D:26:SER:HB3	5:D:236:TRP:CE2	2.42	0.54
5:D:955:LYS:HG3	5:D:1011:VAL:O	2.08	0.54
5:D:986:ASP:OD2	5:D:990:ARG:HB2	2.07	0.54
6:E:3:ARG:NH1	6:E:3:ARG:HA	2.22	0.54
2:J:20:ILE:HG13	2:J:163:PRO:HB2	1.88	0.54
2:J:174:GLU:HG3	2:J:175:PHE:H	1.72	0.54
3:B:27:THR:OG1	3:B:28:LEU:N	2.41	0.54
4:C:529:ARG:HD2	4:C:572:ILE:CG2	2.38	0.54
4:C:1015:ALA:CA	4:C:1018:TYR:HB3	2.33	0.54
5:D:44:ILE:HD11	7:F:450:ILE:CD1	2.37	0.54
5:D:1023:HIS:O	5:D:1125:PRO:HA	2.08	0.54
3:A:197:ASP:O	3:A:198:LEU:HD23	2.08	0.54
4:C:598:VAL:HG12	4:C:628:HIS:NE2	2.23	0.54
4:C:1252:SER:HB3	4:C:1255:THR:O	2.07	0.54
4:C:1285:TYR:HB2	5:D:479:GLU:OE2	2.08	0.54
5:D:1025:MET:HB3	5:D:1124:ILE:CB	2.37	0.54
2:I:63:VAL:HG22	2:I:68:THR:CA	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:103:MET:HE3	2:J:160:TYR:HE1	1.72	0.54
2:J:202:GLU:OE1	2:J:202:GLU:N	2.40	0.54
3:B:11:PRO:HB2	3:B:28:LEU:HD11	1.88	0.54
3:B:48:LEU:HD22	5:D:535:ARG:CG	2.37	0.54
4:C:298:ALA:CB	4:C:334:GLU:HB3	2.37	0.54
4:C:1030:GLU:HG3	4:C:1034:ARG:HH12	1.72	0.54
7:F:229:VAL:HB	7:F:232:ARG:NH2	2.23	0.54
7:F:231:THR:HA	7:F:248:GLU:HB3	1.88	0.54
2:I:13:LEU:HA	2:I:61:THR:O	2.06	0.54
2:I:23:HIS:HA	2:I:26:ARG:CG	2.37	0.54
3:B:65:LEU:CD2	3:B:169:GLY:HA3	2.37	0.54
3:B:197:ASP:O	3:B:198:LEU:HD22	2.07	0.54
4:C:490:GLN:NE2	7:F:472:GLN:HB3	2.22	0.54
4:C:1160:ASP:O	4:C:1161:LEU:HB3	2.07	0.54
4:C:1243:MET:HA	5:D:352:ARG:O	2.06	0.54
4:C:119:GLU:HB2	4:C:489:PRO:CG	2.38	0.54
4:C:130:MET:SD	4:C:134:GLY:HA2	2.47	0.54
4:C:276:GLN:HA	4:C:279:LYS:CD	2.33	0.54
4:C:854:ILE:HG23	4:C:855:PRO:HD2	1.88	0.54
5:D:1269:ALA:HB2	5:D:1274:PHE:HD1	1.72	0.54
2:J:54:ASN:ND2	2:J:61:THR:OG1	2.39	0.54
4:C:714:VAL:O	4:C:767:GLN:NE2	2.40	0.54
4:C:802:VAL:CG2	4:C:1096:ILE:HB	2.38	0.54
4:C:988:LYS:O	4:C:991:LYS:HG3	2.07	0.54
7:F:148:TYR:OH	7:F:218:ARG:HA	2.07	0.54
7:F:229:VAL:O	7:F:232:ARG:HG3	2.08	0.54
2:I:72:SER:HA	2:I:75:ILE:HG13	1.89	0.54
4:C:398:SER:HB2	4:C:401:GLY:N	2.13	0.54
4:C:810:TYR:CE1	5:D:359:PRO:HD2	2.43	0.54
5:D:127:LEU:HD22	5:D:227:PHE:CE1	2.42	0.54
5:D:1039:ASP:OD1	5:D:1074:LEU:HD22	2.08	0.54
5:D:1155:ILE:HD11	5:D:1210:ILE:HG22	1.89	0.54
5:D:1167:LYS:CE	5:D:1170:LYS:HD3	2.38	0.54
7:F:598:LEU:O	7:F:604:SER:OG	2.22	0.54
4:C:577:VAL:HG23	4:C:661:VAL:O	2.08	0.54
4:C:618:GLN:NE2	5:D:770:LEU:HB2	2.23	0.54
4:C:819:SER:HB2	4:C:1085:MET:HG3	1.90	0.54
5:D:165:TYR:CZ	5:D:169:LEU:HD22	2.43	0.54
5:D:930:LEU:HD11	5:D:1246:VAL:CG2	2.37	0.54
7:F:292:VAL:HG21	7:F:299:LYS:HB2	1.89	0.54
4:C:158:ASP:OD1	4:C:159:SER:N	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:289:ASP:O	5:D:293:ARG:HB3	2.08	0.53
2:I:8:ARG:HH12	2:I:10:VAL:HB	1.73	0.53
4:C:292:ILE:HG22	4:C:317:LEU:HD13	1.91	0.53
4:C:348:SER:O	4:C:351:LEU:HB2	2.09	0.53
4:C:622:ASN:O	4:C:623:LEU:HD23	2.09	0.53
5:D:1021:ASP:CG	5:D:1024:THR:HB	2.29	0.53
7:F:596:ARG:O	7:F:600:HIS:ND1	2.40	0.53
3:K:307:LEU:HD13	3:K:313:SER:HA	1.89	0.53
5:D:255:LEU:HD12	5:D:256:ASP:OD1	2.08	0.53
2:I:21:TYR:HB3	2:I:60:PRO:HD3	1.89	0.53
4:C:549:ASP:OD1	4:C:550:VAL:N	2.37	0.53
4:C:1242:LYS:HD2	5:D:465:GLN:NE2	2.23	0.53
5:D:227:PHE:CE2	5:D:1337:VAL:HG13	2.43	0.53
5:D:557:LYS:HB3	5:D:563:LEU:CD1	2.39	0.53
5:D:668:PHE:HB2	5:D:678:ARG:HG3	1.89	0.53
7:F:234:THR:CG2	7:F:245:ALA:HA	2.38	0.53
7:F:390:ILE:CD1	7:F:432:THR:HG23	2.34	0.53
2:I:14:PHE:CB	2:I:50:LEU:HD22	2.38	0.53
2:I:85:HIS:CE1	7:F:567:MET:HG3	2.43	0.53
2:J:157:VAL:HG13	2:J:158:ASP:OD1	2.08	0.53
3:K:282:VAL:O	3:K:316:MET:N	2.41	0.53
4:C:578:TYR:CD2	4:C:659:GLN:HB2	2.43	0.53
4:C:836:LEU:HD13	4:C:1054:LEU:HD13	1.90	0.53
5:D:233:LYS:HB3	5:D:235:GLU:OE1	2.08	0.53
4:C:1132:LEU:HD23	4:C:1132:LEU:O	2.08	0.53
5:D:122:SER:OG	5:D:132:LEU:HD22	2.09	0.53
5:D:288:PRO:CB	7:F:377:LYS:HE3	2.38	0.53
5:D:1031:VAL:HG21	5:D:1088:VAL:HG11	1.89	0.53
4:C:18:ARG:HD3	4:C:1188:ASP:OD1	2.08	0.53
4:C:99:LYS:O	4:C:100:LEU:HD23	2.08	0.53
4:C:229:ILE:HD12	4:C:333:ILE:O	2.09	0.53
4:C:802:VAL:HG22	4:C:1096:ILE:HB	1.91	0.53
4:C:1095:ASP:O	4:C:1096:ILE:HG12	2.08	0.53
4:C:1158:LYS:HA	4:C:1158:LYS:NZ	2.23	0.53
4:C:1253:LEU:HD13	7:F:525:ASP:HB2	1.89	0.53
7:F:137:TYR:CE2	7:F:139:GLU:HB2	2.44	0.53
7:F:139:GLU:HA	7:F:142:THR:HG23	1.91	0.53
7:F:291:CYS:O	7:F:297:MET:HB3	2.09	0.53
2:J:139:ILE:HG21	2:J:149:PHE:HE2	1.74	0.53
2:J:165:LEU:O	2:J:168:LEU:HG	2.09	0.53
4:C:279:LYS:HG3	4:C:280:ASP:OD1	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:1308:ILE:HG21	5:D:379:PRO:HB2	1.91	0.53
5:D:218:THR:HA	5:D:221:ILE:HG22	1.91	0.53
7:F:359:LYS:HA	7:F:359:LYS:HE3	1.91	0.53
8:G:31:DC:H2'	8:G:32:DA:O4'	2.09	0.53
2:J:29:LEU:HD23	2:J:36:PHE:CG	2.43	0.53
4:C:179:TYR:HB2	4:C:397:LEU:O	2.09	0.53
4:C:696:ASP:OD2	4:C:696:ASP:N	2.38	0.53
4:C:834:GLN:NE2	4:C:924:VAL:HG21	2.24	0.53
5:D:978:ARG:O	5:D:996:LYS:HD2	2.07	0.53
5:D:213:LYS:O	5:D:217:LEU:HB2	2.09	0.53
7:F:281:ARG:O	7:F:285:ARG:HG2	2.09	0.53
2:J:113:LEU:HD21	2:J:132:LEU:HB2	1.91	0.52
2:J:185:GLY:O	2:J:189:ARG:HG3	2.09	0.52
4:C:179:TYR:HB2	4:C:398:SER:OG	2.09	0.52
4:C:595:THR:OG1	4:C:598:VAL:O	2.21	0.52
5:D:497:GLU:HG2	5:D:498:PRO:HD2	1.91	0.52
5:D:1167:LYS:H	5:D:1174:ARG:HH21	1.56	0.52
7:F:146:GLU:HB3	7:F:150:ARG:CZ	2.39	0.52
8:G:54:DT:C2	8:G:55:DT:H1'	2.43	0.52
2:J:10:VAL:HB	2:J:65:ARG:HG2	1.92	0.52
2:J:85:HIS:HB2	5:D:86:GLU:OE1	2.09	0.52
2:J:196:PHE:O	2:J:200:LEU:HG	2.10	0.52
3:A:49:SER:OG	4:C:1083:GLU:OE2	2.21	0.52
4:C:202:ARG:HE	4:C:369:MET:HG3	1.74	0.52
4:C:563:THR:HB	4:C:564:PRO:HD2	1.90	0.52
4:C:618:GLN:HE21	5:D:770:LEU:HB2	1.75	0.52
4:C:725:GLN:OE1	4:C:735:LYS:HB2	2.10	0.52
7:F:136:GLU:O	7:F:361:ILE:HD11	2.08	0.52
5:D:820:ILE:HD11	5:D:822:MET:SD	2.50	0.52
5:D:1024:THR:HG23	5:D:1124:ILE:N	2.24	0.52
7:F:136:GLU:CD	7:F:361:ILE:HA	2.30	0.52
7:F:137:TYR:HA	7:F:361:ILE:HD13	1.90	0.52
7:F:299:LYS:HA	7:F:302:PHE:HE2	1.74	0.52
2:J:140:ALA:CB	2:J:183:LEU:HD23	2.40	0.52
2:J:165:LEU:HD12	2:J:168:LEU:HD11	1.92	0.52
4:C:323:ALA:HA	4:C:326:SER:OG	2.09	0.52
4:C:817:LEU:HD21	4:C:1080:ASN:ND2	2.23	0.52
4:C:1327:LEU:HD22	4:C:1337:ILE:CG2	2.36	0.52
5:D:1232:TYR:O	5:D:1236:GLU:HG2	2.10	0.52
7:F:452:ILE:HD11	7:F:457:ILE:CD1	2.39	0.52
1:H:11:DG:H2"	1:H:12:DA:C5'	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:101:THR:O	3:A:115:ILE:HG23	2.09	0.52
3:B:111:THR:OG1	3:B:112:ALA:N	2.42	0.52
4:C:1158:LYS:NZ	4:C:1158:LYS:CA	2.73	0.52
5:D:616:PRO:HA	5:D:619:ILE:HG22	1.90	0.52
5:D:1024:THR:HG23	5:D:1123:ARG:HA	1.89	0.52
7:F:292:VAL:HA	7:F:297:MET:O	2.10	0.52
1:H:6:DA:OP2	1:H:7:DA:N6	2.42	0.52
3:A:7:GLU:HB3	3:B:150:ARG:NH2	2.25	0.52
3:A:185:TYR:HD2	3:A:201:LEU:HD11	1.74	0.52
4:C:199:ASP:O	4:C:200:ARG:CG	2.56	0.52
5:D:1087:ASP:O	5:D:1096:PRO:HB3	2.09	0.52
7:F:585:GLU:HA	7:F:588:ARG:NH1	2.17	0.52
2:I:8:ARG:NH1	2:I:10:VAL:HB	2.25	0.52
3:A:57:THR:HG21	3:A:147:GLN:NE2	2.24	0.52
4:C:468:LEU:O	4:C:471:VAL:HG12	2.10	0.52
4:C:494:ASN:O	4:C:498:ILE:HD13	2.09	0.52
4:C:1214:ASP:OD1	4:C:1215:GLY:N	2.43	0.52
5:D:905:ARG:NH1	5:D:910:ASN:OD1	2.42	0.52
5:D:982:LEU:HD21	5:D:997:VAL:CG2	2.39	0.52
7:F:290:LEU:HD22	7:F:294:GLN:OE1	2.10	0.52
2:I:162:ALA:HB3	2:I:163:PRO:HD3	1.91	0.52
2:J:32:LYS:NZ	2:J:83:PHE:O	2.23	0.52
4:C:1158:LYS:HZ2	4:C:1158:LYS:H	1.58	0.52
5:D:208:THR:HG21	5:D:213:LYS:HE3	1.92	0.52
5:D:1029:THR:HG22	5:D:1117:SER:HA	1.91	0.52
5:D:1102:PRO:HG2	5:D:1124:ILE:CG1	2.37	0.52
1:H:8:DA:C2	8:G:56:DT:H1'	2.45	0.52
2:J:129:ARG:NH1	2:J:129:ARG:HB2	2.25	0.52
4:C:65:ASN:O	4:C:105:TYR:HB2	2.09	0.52
5:D:863:LEU:HD21	5:D:901:ARG:HG3	1.92	0.52
5:D:956:GLY:C	5:D:1010:GLN:HG3	2.30	0.52
3:B:67:GLU:HA	3:B:78:ILE:HD12	1.91	0.52
5:D:425:ARG:HG2	5:D:426:ALA:H	1.75	0.52
5:D:839:VAL:HG23	5:D:882:VAL:HG11	1.91	0.52
5:D:958:ILE:CG2	5:D:960:LEU:HD21	2.38	0.52
5:D:1102:PRO:HG2	5:D:1124:ILE:CD1	2.40	0.52
7:F:138:PRO:CG	7:F:353:LEU:HD11	2.39	0.52
8:G:32:DA:H2"	8:G:33:DA:C5'	2.39	0.52
2:I:61:THR:HG23	2:I:68:THR:OG1	2.11	0.51
2:I:115:ASN:O	2:I:118:ILE:HG22	2.10	0.51
4:C:103:VAL:HG12	4:C:116:ASP:CB	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:288:PRO:O	5:D:292:VAL:HG12	2.10	0.51
5:D:948:SER:HA	5:D:1022:PRO:CG	2.40	0.51
7:F:229:VAL:HB	7:F:232:ARG:HH21	1.74	0.51
7:F:548:LEU:O	7:F:548:LEU:HD23	2.10	0.51
2:I:85:HIS:CE1	7:F:561:MET:HA	2.45	0.51
3:A:79:LEU:O	3:A:83:LEU:HG	2.09	0.51
3:B:60:GLU:HA	3:B:170:ARG:HH12	1.75	0.51
4:C:243:PRO:HB3	4:C:277:LEU:CB	2.40	0.51
5:D:17:PHE:O	5:D:1369:ARG:NH2	2.44	0.51
5:D:673:VAL:HG22	5:D:674:THR:O	2.10	0.51
5:D:950:ILE:HD12	5:D:1018:ALA:O	2.11	0.51
5:D:972:LYS:NZ	5:D:1028:ILE:HD13	2.25	0.51
5:D:1104:LYS:HE2	5:D:1124:ILE:HG23	1.91	0.51
5:D:1229:VAL:O	5:D:1233:ILE:HG12	2.10	0.51
7:F:142:THR:HA	7:F:145:LEU:HG	1.93	0.51
7:F:278:ASP:OD1	7:F:278:ASP:N	2.26	0.51
7:F:347:ILE:HG12	7:F:350:GLU:OE1	2.10	0.51
3:B:101:THR:HG22	3:B:143:ARG:CD	2.38	0.51
4:C:189:ASP:OD2	4:C:193:ASN:HB2	2.10	0.51
4:C:303:ASP:O	4:C:307:GLY:N	2.42	0.51
4:C:1103:VAL:HG11	4:C:1112:ILE:CD1	2.40	0.51
4:C:1131:MET:CE	4:C:1141:LEU:HD12	2.40	0.51
4:C:1211:ARG:HD3	4:C:1220:GLN:HE22	1.75	0.51
5:D:1026:PRO:HA	5:D:1122:ALA:O	2.10	0.51
7:F:141:ILE:CD1	7:F:252:LEU:HD11	2.41	0.51
2:J:140:ALA:HB2	2:J:183:LEU:HD23	1.92	0.51
4:C:117:ILE:CD1	4:C:489:PRO:HD3	2.39	0.51
4:C:241:LEU:CD2	4:C:246:LEU:HD11	2.40	0.51
4:C:452:ARG:NH1	4:C:458:GLU:OE2	2.32	0.51
4:C:1336:ASN:HD22	5:D:33:TRP:HZ2	1.56	0.51
5:D:983:LYS:HG2	5:D:985:ILE:HD13	1.92	0.51
5:D:1000:GLY:HA3	5:D:1026:PRO:HD2	1.91	0.51
5:D:1038:THR:O	5:D:1038:THR:OG1	2.28	0.51
7:F:284:GLU:HA	7:F:287:ILE:HD12	1.92	0.51
7:F:288:MET:O	7:F:292:VAL:N	2.37	0.51
7:F:367:ILE:O	7:F:371:LYS:HB2	2.10	0.51
7:F:530:LEU:O	7:F:533:ASP:N	2.40	0.51
2:I:123:SER:O	2:I:127:ALA:N	2.29	0.51
3:A:12:ARG:HB3	3:A:12:ARG:NH1	2.25	0.51
3:A:40:GLY:HA3	3:A:185:TYR:CE2	2.45	0.51
3:B:71:LYS:HB3	3:B:74:VAL:HG21	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:1256:GLN:OE1	7:F:528:LEU:HD21	2.11	0.51
5:D:660:GLU:HG2	5:D:685:ILE:HD12	1.91	0.51
5:D:816:THR:OG1	5:D:889:ASP:HB2	2.11	0.51
5:D:825:VAL:HG13	5:D:832:LYS:HB2	1.91	0.51
5:D:1011:VAL:CG2	5:D:1017:VAL:HB	2.31	0.51
7:F:150:ARG:CB	7:F:155:GLU:HB3	2.40	0.51
7:F:327:SER:O	7:F:330:LEU:HB2	2.11	0.51
1:H:43:DG:H2'	1:H:44:DG:N7	2.26	0.51
4:C:12:ARG:HD3	4:C:1183:ALA:HB2	1.93	0.51
4:C:38:PHE:HE1	4:C:461:GLU:HB2	1.75	0.51
4:C:203:LYS:O	4:C:204:LEU:HD23	2.11	0.51
4:C:260:LYS:HE2	4:C:261:VAL:O	2.10	0.51
4:C:680:LEU:O	4:C:680:LEU:HD23	2.10	0.51
4:C:867:GLU:OE1	4:C:867:GLU:N	2.44	0.51
4:C:1158:LYS:NZ	4:C:1158:LYS:H	2.09	0.51
5:D:833:GLU:HG2	5:D:838:ARG:HG3	1.92	0.51
5:D:973:LEU:HD12	5:D:973:LEU:H	1.74	0.51
5:D:1003:LEU:HA	5:D:1018:ALA:HA	1.93	0.51
5:D:1005:LYS:HB2	5:D:1017:VAL:HG23	1.93	0.51
5:D:1155:ILE:O	5:D:1156:LEU:HD22	2.10	0.51
4:C:742:TYR:HB3	4:C:743:PRO:HD2	1.93	0.51
5:D:264:ASP:OD2	7:F:506:SER:OG	2.24	0.51
5:D:511:TYR:CE2	5:D:515:ARG:HD2	2.46	0.51
2:I:41:VAL:HB	2:I:46:PRO:HA	1.91	0.51
2:J:129:ARG:HG3	2:J:173:ILE:CD1	2.40	0.51
2:J:158:ASP:HB3	2:J:186:TYR:OH	2.11	0.51
3:A:228:LEU:HD11	3:B:224:LEU:HD23	1.92	0.51
3:B:83:LEU:CD1	5:D:528:THR:HB	2.41	0.51
4:C:303:ASP:N	4:C:310:ILE:HG12	2.26	0.51
4:C:1008:GLN:HA	4:C:1011:LEU:HD12	1.93	0.51
5:D:1151:LYS:O	5:D:1152:GLU:HG2	2.11	0.51
2:J:140:ALA:HB3	2:J:141:PRO:HD3	1.92	0.51
4:C:397:LEU:HB2	4:C:418:GLY:O	2.11	0.51
5:D:1167:LYS:HE3	5:D:1170:LYS:CB	2.35	0.51
7:F:286:LEU:HD23	7:F:290:LEU:HB2	1.93	0.51
7:F:341:LEU:O	7:F:345:GLN:HG3	2.11	0.51
7:F:552:THR:OG1	7:F:555:GLU:HB2	2.11	0.51
7:F:558:VAL:HG21	7:F:587:ILE:CD1	2.40	0.51
3:A:82:LEU:HD11	3:A:171:LEU:HD23	1.92	0.51
3:A:194:GLN:O	3:A:195:ARG:HG2	2.11	0.51
4:C:188:PHE:HE1	4:C:194:LEU:HD12	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:615:VAL:CG1	4:C:650:VAL:HA	2.41	0.51
4:C:745:GLU:OE1	4:C:971:LEU:HD11	2.11	0.51
4:C:886:LYS:N	4:C:917:SER:OG	2.30	0.51
4:C:1304:MET:O	4:C:1308:ILE:HG12	2.10	0.51
4:C:1339:LEU:HD13	5:D:17:PHE:CE2	2.46	0.51
5:D:749:LYS:HB2	5:D:750:PRO:CD	2.41	0.51
2:I:63:VAL:HG22	2:I:68:THR:HB	1.93	0.50
2:I:101:LEU:HD23	2:J:74:ILE:HD12	1.93	0.50
3:B:47:LEU:HB3	3:B:180:VAL:HG11	1.92	0.50
4:C:256:GLU:OE1	4:C:286:GLU:HB2	2.11	0.50
4:C:1217:THR:OG1	4:C:1218:GLY:N	2.44	0.50
4:C:1268:GLN:NE2	5:D:352:ARG:HE	2.09	0.50
5:D:1350:ASN:OD1	5:D:1355:ARG:HG3	2.11	0.50
7:F:338:HIS:HA	7:F:341:LEU:HD11	1.92	0.50
1:H:37:DA:C2	7:F:423:ARG:HB2	2.45	0.50
3:B:35:PHE:HA	3:B:38:THR:CG2	2.41	0.50
4:C:1309:VAL:HG23	4:C:1310:ASP:OD1	2.11	0.50
5:D:110:PRO:C	5:D:111:THR:HG22	2.31	0.50
5:D:144:TYR:CZ	5:D:180:MET:HE3	2.45	0.50
5:D:827:GLU:HB2	5:D:832:LYS:CG	2.41	0.50
7:F:276:MET:O	7:F:280:VAL:HG22	2.11	0.50
7:F:297:MET:HE2	7:F:330:LEU:HD11	1.93	0.50
7:F:474:MET:HE1	7:F:482:GLU:OE2	2.10	0.50
4:C:411:ARG:HG2	4:C:412:GLU:H	1.76	0.50
4:C:516:VAL:O	4:C:522:SER:OG	2.29	0.50
4:C:1034:ARG:HB2	4:C:1034:ARG:HH11	1.75	0.50
5:D:398:LYS:HD3	7:F:532:LEU:HD23	1.92	0.50
5:D:841:GLY:HA2	5:D:901:ARG:HD3	1.94	0.50
5:D:1068:THR:HG22	5:D:1069:ALA:H	1.76	0.50
7:F:530:LEU:HD23	7:F:531:PRO:CD	2.38	0.50
1:H:63:DG:C3'	5:D:1170:LYS:HD2	2.41	0.50
2:J:82:ARG:O	2:J:84:PRO:HD3	2.10	0.50
2:J:109:ASP:O	2:J:113:LEU:HB2	2.11	0.50
3:B:85:LEU:HD21	3:B:130:ILE:HD13	1.93	0.50
4:C:164:THR:HG21	4:C:171:LEU:HD12	1.93	0.50
4:C:745:GLU:OE2	4:C:1014:LEU:HA	2.11	0.50
4:C:1131:MET:HE2	4:C:1141:LEU:HD12	1.93	0.50
5:D:114:ILE:HB	5:D:304:ASP:OD1	2.11	0.50
5:D:1087:ASP:OD2	5:D:1096:PRO:HG2	2.11	0.50
5:D:1168:GLU:HG2	5:D:1169:THR:H	1.76	0.50
2:I:21:TYR:O	2:I:25:VAL:HG23	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:202:GLU:HB2	2:J:205:ARG:HH21	1.76	0.50
3:A:29:GLU:HB3	3:A:30:PRO:HD3	1.92	0.50
3:A:226:GLU:O	3:B:10:LYS:NZ	2.27	0.50
4:C:303:ASP:OD2	4:C:310:ILE:HD11	2.12	0.50
4:C:1326:LEU:HD21	5:D:337:ARG:NH2	2.26	0.50
5:D:978:ARG:NH1	5:D:999:TYR:HB2	2.26	0.50
5:D:1109:LEU:HD11	5:D:1115:ILE:HD13	1.93	0.50
5:D:1314:LEU:HD21	5:D:1331:VAL:CG2	2.41	0.50
1:H:11:DG:H4'	3:K:264:VAL:HG21	1.92	0.50
2:I:24:GLN:NE2	2:I:111:TYR:OH	2.45	0.50
2:I:73:ARG:NH1	2:I:73:ARG:HB3	2.26	0.50
2:J:117:ILE:CG2	2:J:171:LEU:HD12	2.39	0.50
2:J:134:GLU:OE1	2:J:137:LEU:HD11	2.12	0.50
4:C:255:ILE:HG21	4:C:263:VAL:H	1.76	0.50
4:C:349:GLU:OE1	4:C:352:ARG:NH1	2.45	0.50
4:C:672:GLU:OE2	4:C:1187:PHE:HA	2.11	0.50
5:D:665:GLN:HE21	5:D:669:GLN:HE21	1.58	0.50
5:D:810:THR:HG21	5:D:892:PHE:O	2.10	0.50
5:D:1065:ALA:HB2	5:D:1193:TRP:O	2.12	0.50
5:D:1164:SER:O	5:D:1175:LEU:HD12	2.12	0.50
5:D:1276:GLU:HG2	5:D:1277:GLY:H	1.74	0.50
4:C:192:ASP:HB3	4:C:346:TYR:HD1	1.76	0.50
4:C:506:PHE:O	4:C:512:SER:OG	2.30	0.50
5:D:351:GLY:O	5:D:467:ALA:HA	2.11	0.50
5:D:1063:ASP:OD1	5:D:1063:ASP:N	2.44	0.50
5:D:1215:GLU:CG	5:D:1220:ILE:HD11	2.42	0.50
5:D:1264:ALA:HB2	5:D:1280:VAL:HG22	1.94	0.50
6:E:3:ARG:NH2	6:E:52:ARG:HG3	2.26	0.50
7:F:277:MET:HA	7:F:280:VAL:HG22	1.94	0.50
7:F:310:GLU:HB2	7:F:355:ILE:HG21	1.92	0.50
1:H:42:DG:H4'	1:H:43:DG:O5'	2.11	0.50
2:I:16:GLY:N	2:I:22:SER:OG	2.27	0.50
2:I:113:LEU:O	2:I:117:ILE:HG13	2.12	0.50
4:C:53:PHE:HD1	4:C:468:LEU:HD11	1.76	0.50
5:D:320:ASN:OD1	5:D:321:LYS:N	2.41	0.50
5:D:1150:PRO:CD	5:D:1216:ALA:HB2	2.42	0.50
5:D:1215:GLU:HG3	5:D:1220:ILE:HD11	1.92	0.50
1:H:27:DA:H2'	1:H:27:DA:OP2	2.12	0.50
1:H:40:DA:H62	7:F:429:THR:HA	1.77	0.50
2:I:72:SER:HA	2:I:75:ILE:CG1	2.42	0.50
2:I:166:TRP:CE2	2:I:200:LEU:HD11	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:50:SER:HB3	3:B:8:PHE:HZ	1.76	0.50
3:A:61:ILE:HG22	3:A:62:ASP:H	1.76	0.50
4:C:303:ASP:HB2	4:C:310:ILE:HD11	1.94	0.50
4:C:1002:LEU:HD23	4:C:1007:LYS:CD	2.41	0.50
5:D:107:LEU:HD13	5:D:111:THR:CG2	2.42	0.50
5:D:619:ILE:O	5:D:619:ILE:HG12	2.12	0.50
2:J:103:MET:HB2	2:J:160:TYR:CE1	2.46	0.49
3:B:60:GLU:O	3:B:142:MET:HA	2.12	0.49
4:C:358:ASP:OD1	4:C:361:SER:HB3	2.12	0.49
4:C:571:LEU:O	4:C:572:ILE:HD13	2.12	0.49
4:C:1157:GLN:HG3	4:C:1159:VAL:HB	1.94	0.49
4:C:1213:TYR:CD2	4:C:1220:GLN:HB2	2.47	0.49
6:E:6:VAL:O	6:E:10:VAL:HG23	2.12	0.49
7:F:167:ASP:HB3	7:F:258:GLN:NE2	2.24	0.49
7:F:456:MET:HE1	7:F:497:VAL:HG22	1.93	0.49
7:F:591:GLU:HG3	7:F:595:LEU:HD23	1.92	0.49
1:H:37:DA:C2	7:F:425:TYR:HB2	2.46	0.49
2:J:116:THR:HA	2:J:120:GLY:N	2.27	0.49
3:K:280:ASP:N	3:K:280:ASP:OD1	2.45	0.49
4:C:1002:LEU:HD23	4:C:1007:LYS:HB2	1.93	0.49
4:C:1250:SER:OG	4:C:1259:LEU:O	2.29	0.49
5:D:116:PHE:O	5:D:124:ILE:HG13	2.11	0.49
5:D:217:LEU:O	5:D:221:ILE:HG22	2.12	0.49
5:D:664:ILE:CD1	5:D:681:LYS:HG2	2.42	0.49
7:F:233:ASP:OD1	7:F:236:LYS:HD3	2.11	0.49
7:F:286:LEU:HD21	7:F:290:LEU:CD2	2.41	0.49
7:F:499:LYS:O	7:F:500:ILE:HD13	2.11	0.49
3:B:99:ILE:HD11	3:B:143:ARG:HB3	1.94	0.49
4:C:303:ASP:HB2	4:C:308:GLU:O	2.11	0.49
4:C:715:THR:CG2	4:C:782:VAL:HG13	2.42	0.49
4:C:936:ARG:O	4:C:939:VAL:HG12	2.12	0.49
7:F:102:MET:CE	7:F:388:ILE:HD13	2.42	0.49
7:F:251:LYS:O	7:F:255:VAL:HG13	2.12	0.49
7:F:470:MET:O	7:F:474:MET:HB3	2.12	0.49
7:F:489:MET:HG3	7:F:494:ILE:HD11	1.94	0.49
2:I:111:TYR:HE1	2:I:164:LEU:HD11	1.77	0.49
2:J:175:PHE:CZ	2:J:183:LEU:HG	2.47	0.49
4:C:239:MET:CE	4:C:241:LEU:HD13	2.42	0.49
4:C:292:ILE:HG22	4:C:317:LEU:CD1	2.42	0.49
4:C:524:ILE:O	4:C:524:ILE:HD13	2.13	0.49
4:C:1155:VAL:HG12	4:C:1156:ARG:H	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:747:MET:CG	5:D:759:ILE:HD11	2.38	0.49
5:D:1023:HIS:NE2	5:D:1127:GLU:HG2	2.27	0.49
5:D:1024:THR:CG2	5:D:1123:ARG:HA	2.43	0.49
5:D:1033:GLY:HA2	5:D:1114:GLN:HE22	1.75	0.49
6:E:67:ARG:NH1	6:E:71:GLU:OE2	2.31	0.49
6:E:76:GLU:HA	6:E:79:GLU:CG	2.42	0.49
1:H:42:DG:H8	7:F:385:ARG:HG3	1.77	0.49
2:I:87:PRO:HD3	7:F:567:MET:SD	2.52	0.49
2:J:19:ASP:OD2	2:J:21:TYR:HB2	2.13	0.49
4:C:297:VAL:CG1	4:C:313:ALA:HA	2.42	0.49
5:D:198:CYS:O	5:D:202:ARG:HG2	2.12	0.49
7:F:137:TYR:HA	7:F:361:ILE:CD1	2.42	0.49
7:F:325:PRO:O	7:F:329:LYS:HB2	2.11	0.49
1:H:53:DC:H2"	1:H:54:DG:O5'	2.13	0.49
3:K:255:ARG:HB2	3:K:278:ILE:HD12	1.93	0.49
5:D:552:ILE:HD12	5:D:589:TYR:CD1	2.46	0.49
7:F:160:ASP:O	7:F:262:VAL:HB	2.12	0.49
8:G:36:DT:H2"	8:G:37:DA:C5'	2.43	0.49
2:I:42:GLU:OE1	2:I:43:LYS:HD2	2.12	0.49
3:B:164:ASP:O	3:B:166:ARG:HG3	2.12	0.49
4:C:953:LEU:HD11	4:C:1033:ARG:HG3	1.93	0.49
4:C:1041:ASP:N	4:C:1041:ASP:OD1	2.42	0.49
7:F:148:TYR:HH	7:F:218:ARG:HA	1.78	0.49
7:F:151:VAL:HG23	7:F:156:ALA:HB3	1.94	0.49
4:C:8:LYS:HD3	4:C:1168:GLU:OE2	2.12	0.49
4:C:91:THR:HG21	4:C:503:LYS:NZ	2.27	0.49
4:C:131:THR:HG23	4:C:135:THR:O	2.12	0.49
4:C:150:HIS:CD2	4:C:454:ARG:HG3	2.48	0.49
4:C:230:PHE:HE2	4:C:292:ILE:HD12	1.77	0.49
4:C:1287:LEU:O	4:C:1287:LEU:HD23	2.13	0.49
5:D:394:ILE:HG12	7:F:532:LEU:HD11	1.94	0.49
7:F:261:LEU:HG	7:F:262:VAL:H	1.78	0.49
7:F:586:ARG:HG3	7:F:590:ILE:HD11	1.95	0.49
2:J:64:ASP:OD1	2:J:64:ASP:N	2.44	0.49
3:A:8:PHE:CE1	3:A:32:GLU:HG2	2.47	0.49
4:C:239:MET:HB3	4:C:287:VAL:HG11	1.94	0.49
4:C:255:ILE:HB	4:C:263:VAL:O	2.13	0.49
4:C:296:VAL:CG1	4:C:336:LEU:HD12	2.42	0.49
5:D:972:LYS:NZ	5:D:974:VAL:HA	2.27	0.49
7:F:561:MET:SD	7:F:576:VAL:HG13	2.53	0.49
2:I:46:PRO:CB	2:I:50:LEU:HD23	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:119:GLU:HB2	4:C:489:PRO:CD	2.42	0.49
4:C:210:LEU:HD11	4:C:429:MET:CE	2.43	0.49
4:C:257:ALA:HB3	4:C:262:TYR:CE2	2.48	0.49
4:C:981:ALA:O	4:C:1002:LEU:HD21	2.13	0.49
4:C:1158:LYS:NZ	4:C:1158:LYS:N	2.60	0.49
5:D:405:GLU:O	5:D:408:VAL:HG22	2.12	0.49
5:D:499:ILE:O	5:D:500:ILE:HD13	2.13	0.49
5:D:615:LYS:HB2	5:D:616:PRO:HD3	1.95	0.49
5:D:966:VAL:HG12	5:D:967:VAL:O	2.13	0.49
5:D:1270:GLY:HA3	5:D:1297:LYS:O	2.13	0.49
2:J:139:ILE:O	2:J:142:VAL:HG13	2.13	0.48
4:C:210:LEU:HB3	4:C:220:ILE:CD1	2.43	0.48
4:C:264:GLU:HB2	4:C:267:ARG:CZ	2.43	0.48
4:C:607:SER:OG	4:C:608:ALA:N	2.46	0.48
4:C:1192:GLU:O	4:C:1196:LYS:HG2	2.13	0.48
5:D:298:MET:CE	7:F:406:GLN:HG3	2.43	0.48
5:D:1082:ASP:OD2	5:D:1086:ASN:HB3	2.13	0.48
5:D:1143:ASP:OD1	5:D:1148:ARG:HD2	2.12	0.48
7:F:262:VAL:HG13	7:F:263:PRO:HD2	1.94	0.48
7:F:267:ASP:OD1	7:F:268:TYR:N	2.46	0.48
7:F:465:ARG:NH2	8:G:26:DT:H2'	2.25	0.48
1:H:22:DG:H2"	1:H:23:DT:C5	2.47	0.48
1:H:40:DA:C6	7:F:429:THR:HG22	2.47	0.48
1:H:62:DG:C8	1:H:62:DG:H5'	2.48	0.48
2:I:17:PRO:HG3	2:I:40:HIS:HB3	1.94	0.48
4:C:453:ILE:CD1	4:C:587:LEU:HD11	2.43	0.48
4:C:631:GLU:OE1	4:C:631:GLU:N	2.45	0.48
4:C:1115:THR:CG2	4:C:1228:GLY:HA3	2.43	0.48
5:D:416:ILE:CG2	5:D:439:PRO:HG2	2.43	0.48
5:D:514:THR:HG21	5:D:596:LEU:CB	2.42	0.48
5:D:709:ARG:HD2	5:D:714:GLU:CD	2.33	0.48
5:D:820:ILE:O	5:D:881:LYS:HA	2.13	0.48
5:D:960:LEU:HD22	5:D:982:LEU:HA	1.95	0.48
7:F:344:LEU:HA	7:F:347:ILE:HG13	1.94	0.48
3:A:16:ILE:CD1	3:A:214:GLU:HB2	2.44	0.48
5:D:120:LEU:HD12	5:D:1330:ARG:NH2	2.28	0.48
5:D:905:ARG:HH21	5:D:907:HIS:CB	2.24	0.48
7:F:585:GLU:CB	7:F:588:ARG:HD2	2.43	0.48
1:H:58:DG:H2"	1:H:59:DC:H5"	1.94	0.48
2:I:82:ARG:HD3	2:J:93:PRO:HB2	1.96	0.48
4:C:413:GLU:HB2	4:C:415:GLU:OE1	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:689:ALA:CB	4:C:1233:LEU:HD12	2.43	0.48
5:D:475:GLU:O	5:D:479:GLU:HG3	2.13	0.48
5:D:710:ASP:OD1	5:D:710:ASP:N	2.44	0.48
5:D:980:THR:O	5:D:997:VAL:N	2.46	0.48
5:D:1038:THR:HG23	5:D:1077:ALA:O	2.13	0.48
5:D:1042:ASP:CG	5:D:1048:ARG:HD2	2.34	0.48
5:D:1194:ARG:HD3	5:D:1211:SER:OG	2.12	0.48
7:F:347:ILE:HA	7:F:350:GLU:OE1	2.13	0.48
2:I:193:ARG:O	2:I:197:LEU:N	2.28	0.48
2:J:103:MET:HB2	2:J:160:TYR:HE1	1.77	0.48
4:C:147:SER:HB2	4:C:530:ILE:HD13	1.96	0.48
4:C:796:LEU:N	4:C:1231:TYR:OH	2.47	0.48
4:C:1247:SER:HB2	5:D:375:GLU:O	2.12	0.48
5:D:801:VAL:HG21	5:D:917:VAL:HG13	1.95	0.48
5:D:985:ILE:HG23	5:D:990:ARG:O	2.12	0.48
7:F:305:LEU:HB2	7:F:314:THR:HB	1.95	0.48
7:F:322:MET:HG3	7:F:324:LYS:HD3	1.94	0.48
8:G:51:DT:H2"	8:G:52:DC:C6	2.48	0.48
4:C:163:LYS:HZ3	4:C:164:THR:HA	1.78	0.48
4:C:1043:ALA:HB1	4:C:1044:PRO:HD2	1.94	0.48
4:C:1340:GLU:HB2	5:D:18:ASP:O	2.13	0.48
5:D:298:MET:SD	7:F:402:LEU:HG	2.53	0.48
7:F:354:THR:HG23	7:F:356:GLU:N	2.28	0.48
1:H:10:DT:H2"	1:H:11:DG:C8	2.48	0.48
1:H:61:DG:H4'	1:H:62:DG:C5'	2.43	0.48
5:D:502:PRO:HG2	5:D:601:ILE:HG21	1.95	0.48
5:D:681:LYS:O	5:D:685:ILE:HG22	2.14	0.48
5:D:1119:ASP:OD1	5:D:1120:THR:N	2.47	0.48
7:F:462:LYS:HE2	7:F:462:LYS:HB3	1.59	0.48
2:J:201:THR:N	2:J:204:GLU:OE2	2.43	0.48
3:A:222:THR:HG22	3:B:232:VAL:CA	2.43	0.48
4:C:685:MET:HE2	4:C:1073:LYS:HD3	1.95	0.48
5:D:975:ILE:HD12	5:D:976:THR:H	1.78	0.48
7:F:145:LEU:HD12	7:F:146:GLU:N	2.29	0.48
7:F:533:ASP:O	7:F:537:THR:HG23	2.14	0.48
8:G:42:DT:H2"	8:G:43:DT:C6	2.49	0.48
3:B:19:VAL:O	3:B:23:HIS:HB3	2.14	0.48
4:C:377:THR:HG22	4:C:378:ARG:H	1.78	0.48
4:C:899:GLU:HG2	7:F:540:LEU:CD1	2.44	0.48
5:D:1046:ILE:CG2	5:D:1059:LEU:HD23	2.44	0.48
5:D:1314:LEU:HD21	5:D:1331:VAL:HG22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:266:PHE:O	7:F:270:VAL:HG13	2.14	0.48
8:G:26:DT:H2"	8:G:27:DA:OP2	2.14	0.48
2:I:68:THR:C	2:I:69:LEU:HD12	2.34	0.48
2:J:103:MET:HE3	2:J:160:TYR:CE1	2.49	0.48
3:A:155:ALA:O	3:A:158:ARG:HG2	2.14	0.48
4:C:216:THR:O	4:C:220:ILE:HG12	2.14	0.48
4:C:589:THR:CG2	4:C:590:PRO:HD2	2.43	0.48
4:C:840:SER:O	4:C:840:SER:OG	2.31	0.48
4:C:953:LEU:O	4:C:953:LEU:HD12	2.14	0.48
4:C:1024:GLU:O	4:C:1028:LYS:HG3	2.12	0.48
5:D:959:LYS:CG	5:D:985:ILE:HG13	2.43	0.48
5:D:980:THR:O	5:D:996:LYS:HD3	2.14	0.48
5:D:1031:VAL:CG2	5:D:1088:VAL:HG11	2.43	0.48
7:F:283:GLN:O	7:F:287:ILE:HG13	2.14	0.48
7:F:427:PHE:CE2	7:F:431:ALA:HB2	2.49	0.48
1:H:19:DA:H4'	1:H:20:DA:OP1	2.14	0.47
2:I:67:LEU:HD12	2:I:68:THR:H	1.79	0.47
2:J:202:GLU:HA	2:J:205:ARG:NE	2.29	0.47
3:A:47:LEU:HB2	3:A:183:ILE:HD12	1.96	0.47
3:B:91:ARG:O	3:B:91:ARG:HG2	2.14	0.47
4:C:83:GLN:O	4:C:87:ILE:HG13	2.14	0.47
4:C:323:ALA:O	4:C:327:GLN:HG3	2.14	0.47
4:C:734:ILE:CD1	4:C:777:VAL:HG21	2.44	0.47
4:C:985:GLU:HG2	4:C:988:LYS:CD	2.39	0.47
4:C:1105:SER:HA	5:D:736:GLN:OE1	2.13	0.47
5:D:532:GLU:HG3	5:D:532:GLU:O	2.13	0.47
5:D:1234:VAL:O	5:D:1238:GLN:HB2	2.13	0.47
8:G:58:DG:H2'	8:G:59:DT:C7	2.43	0.47
2:I:159:CYS:O	2:I:163:PRO:HD2	2.14	0.47
3:A:77:ASP:OD1	3:A:77:ASP:N	2.46	0.47
4:C:241:LEU:N	4:C:283:LYS:O	2.41	0.47
4:C:246:LEU:HA	4:C:249:GLU:CD	2.34	0.47
4:C:985:GLU:O	4:C:989:LEU:HD13	2.14	0.47
5:D:634:ARG:H	5:D:634:ARG:HG2	1.52	0.47
5:D:1029:THR:CB	5:D:1118:GLY:H	2.26	0.47
7:F:248:GLU:HA	7:F:251:LYS:HB2	1.97	0.47
7:F:315:TRP:CH2	7:F:337:VAL:HB	2.48	0.47
7:F:575:GLU:HA	7:F:578:LYS:NZ	2.29	0.47
2:I:85:HIS:HB3	7:F:557:LYS:HZ3	1.78	0.47
4:C:782:VAL:O	4:C:783:LEU:HD23	2.14	0.47
4:C:836:LEU:CD1	4:C:1054:LEU:HD13	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:491:LEU:HB2	5:D:904:ALA:O	2.14	0.47
5:D:947:GLU:HG2	5:D:1020:TRP:CZ2	2.49	0.47
7:F:560:ARG:HG3	7:F:565:ILE:CG2	2.45	0.47
7:F:600:HIS:HB3	7:F:601:PRO:HD2	1.97	0.47
8:G:57:DT:H2"	8:G:58:DG:O4'	2.14	0.47
1:H:58:DG:H2"	1:H:59:DC:O4'	2.14	0.47
3:B:67:GLU:HA	3:B:78:ILE:CD1	2.44	0.47
4:C:298:ALA:HB3	4:C:334:GLU:HB3	1.95	0.47
4:C:849:GLU:O	4:C:886:LYS:HG3	2.14	0.47
4:C:1138:VAL:HG11	4:C:1166:ASP:HA	1.96	0.47
5:D:317:THR:HG21	5:D:320:ASN:HB3	1.94	0.47
7:F:231:THR:HG21	7:F:252:LEU:HB2	1.95	0.47
7:F:481:GLU:OE1	7:F:491:GLU:HG3	2.13	0.47
2:J:50:LEU:O	2:J:54:ASN:HB3	2.14	0.47
2:J:90:PRO:HG2	2:J:96:ARG:CA	2.44	0.47
2:J:169:PRO:HD3	2:J:208:ARG:HH21	1.77	0.47
4:C:238:GLN:CB	4:C:284:LEU:HD11	2.37	0.47
4:C:970:GLY:HA2	4:C:973:SER:OG	2.14	0.47
4:C:1295:SER:OG	5:D:347:VAL:HA	2.14	0.47
4:C:1307:ASN:HB3	4:C:1312:ASN:O	2.14	0.47
5:D:245:LEU:HD12	5:D:245:LEU:HA	1.73	0.47
5:D:682:VAL:HA	5:D:685:ILE:CG2	2.45	0.47
7:F:306:PHE:CZ	7:F:341:LEU:HD22	2.50	0.47
7:F:588:ARG:O	7:F:592:ALA:HB2	2.14	0.47
2:I:85:HIS:HB3	7:F:557:LYS:NZ	2.28	0.47
3:A:197:ASP:N	3:A:197:ASP:OD1	2.47	0.47
3:B:28:LEU:HD12	3:B:29:GLU:N	2.30	0.47
3:B:104:LYS:HE3	3:B:114:ASP:OD2	2.14	0.47
4:C:519:ASN:HB3	4:C:521:LEU:H	1.79	0.47
4:C:1158:LYS:HA	4:C:1158:LYS:CE	2.44	0.47
5:D:1030:GLU:OE1	5:D:1099:TYR:OH	2.32	0.47
5:D:1123:ARG:C	5:D:1124:ILE:HD12	2.34	0.47
5:D:1150:PRO:HD3	5:D:1216:ALA:HB2	1.95	0.47
7:F:290:LEU:HD12	7:F:337:VAL:CG1	2.45	0.47
2:I:132:LEU:O	2:I:136:LEU:HG	2.15	0.47
2:I:148:TYR:HB3	2:I:158:ASP:OD2	2.14	0.47
2:J:90:PRO:HB2	2:J:96:ARG:HG3	1.96	0.47
3:A:133:LEU:HD12	3:A:138:ALA:CB	2.45	0.47
3:A:133:LEU:HD12	3:A:138:ALA:HB1	1.97	0.47
4:C:13:LYS:HD2	4:C:14:ASP:H	1.79	0.47
4:C:378:ARG:HB3	4:C:379:GLU:OE1	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:594:VAL:HG23	4:C:652:TYR:HA	1.96	0.47
4:C:816:ILE:HG22	4:C:817:LEU:O	2.14	0.47
4:C:1270:PHE:CE2	4:C:1290:MET:HG2	2.50	0.47
5:D:211:GLU:O	5:D:215:LYS:HB2	2.13	0.47
5:D:364:HIS:HB3	5:D:487:THR:CG2	2.44	0.47
5:D:661:VAL:CG2	5:D:682:VAL:HG13	2.44	0.47
5:D:872:LEU:HD22	5:D:877:VAL:CG1	2.44	0.47
5:D:967:VAL:HA	5:D:973:LEU:HA	1.97	0.47
6:E:70:GLN:O	6:E:74:GLU:N	2.28	0.47
7:F:164:GLY:O	7:F:260:ARG:HD2	2.14	0.47
7:F:332:ASP:OD1	7:F:332:ASP:N	2.48	0.47
7:F:560:ARG:HG3	7:F:565:ILE:HB	1.96	0.47
7:F:561:MET:HE1	7:F:576:VAL:HA	1.96	0.47
7:F:572:THR:O	7:F:575:GLU:HB3	2.14	0.47
2:J:197:LEU:O	2:J:200:LEU:HD12	2.14	0.47
4:C:12:ARG:HG3	4:C:1181:PRO:O	2.15	0.47
5:D:58:CYS:SG	5:D:59:ALA:N	2.88	0.47
5:D:142:GLU:OE1	7:F:100:MET:HE1	2.15	0.47
5:D:690:ASN:HA	5:D:743:MET:HE2	1.96	0.47
5:D:959:LYS:CE	5:D:985:ILE:HG21	2.45	0.47
7:F:250:LEU:HD22	7:F:254:GLU:CG	2.31	0.47
7:F:297:MET:CE	7:F:330:LEU:HD11	2.45	0.47
7:F:373:ARG:HH12	7:F:377:LYS:HD2	1.78	0.47
1:H:38:DT:H2'	7:F:429:THR:HG21	1.97	0.47
1:H:63:DG:C4'	5:D:1170:LYS:HD2	2.45	0.47
2:J:14:PHE:CE2	2:J:50:LEU:HD13	2.50	0.47
4:C:53:PHE:CD1	4:C:468:LEU:HD11	2.49	0.47
4:C:177:ILE:HG22	4:C:183:TRP:CE2	2.50	0.47
4:C:354:ASP:OD1	4:C:356:THR:HG22	2.15	0.47
4:C:716:ALA:CB	4:C:784:ALA:HB3	2.43	0.47
4:C:964:LEU:HB3	4:C:968:GLU:OE2	2.15	0.47
5:D:452:LEU:HD13	5:D:500:ILE:HG22	1.96	0.47
5:D:1280:VAL:HG21	5:D:1304:ARG:HE	1.80	0.47
7:F:161:LEU:H	7:F:161:LEU:HD23	1.80	0.47
1:H:13:DT:OP2	7:F:586:ARG:HD3	2.15	0.47
1:H:42:DG:C8	7:F:385:ARG:HG3	2.50	0.47
2:I:72:SER:HA	2:I:75:ILE:CD1	2.45	0.47
2:I:192:GLU:HA	2:I:197:LEU:CD2	2.42	0.47
2:J:113:LEU:CD2	2:J:132:LEU:HB2	2.44	0.47
3:B:103:ASN:HA	3:B:141:SER:HA	1.97	0.47
3:B:120:ASP:OD1	3:B:120:ASP:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:448:LEU:HD12	4:C:554:HIS:ND1	2.30	0.47
4:C:471:VAL:CG2	4:C:498:ILE:HD11	2.45	0.47
4:C:976:ARG:HB2	4:C:976:ARG:NH1	2.30	0.47
4:C:1259:LEU:HD12	4:C:1260:GLY:N	2.31	0.47
5:D:1002:VAL:O	5:D:1019:ASN:N	2.39	0.47
7:F:96:ASP:OD1	7:F:96:ASP:N	2.47	0.47
7:F:129:GLN:O	7:F:133:SER:OG	2.24	0.47
7:F:297:MET:HG2	7:F:298:PRO:O	2.15	0.47
7:F:586:ARG:O	7:F:590:ILE:HG13	2.15	0.47
2:I:22:SER:O	2:I:26:ARG:HG3	2.14	0.46
2:I:72:SER:HA	2:I:75:ILE:HD12	1.97	0.46
3:A:134:THR:OG1	4:C:773:LEU:HD11	2.14	0.46
4:C:104:ILE:O	4:C:114:VAL:HB	2.15	0.46
4:C:887:VAL:HG23	4:C:913:VAL:HG21	1.97	0.46
4:C:1002:LEU:HD23	4:C:1007:LYS:CG	2.44	0.46
4:C:1132:LEU:HD22	4:C:1177:ARG:NH2	2.30	0.46
5:D:45:ASN:HB3	5:D:48:THR:O	2.14	0.46
5:D:51:PRO:HB2	5:D:57:PHE:O	2.15	0.46
5:D:127:LEU:HD21	5:D:234:PRO:HB3	1.95	0.46
5:D:170:GLU:N	5:D:170:GLU:OE1	2.48	0.46
5:D:559:ALA:HB3	5:D:562:GLU:CG	2.33	0.46
5:D:947:GLU:HG2	5:D:1020:TRP:CH2	2.50	0.46
5:D:1046:ILE:HG21	5:D:1059:LEU:HD23	1.97	0.46
7:F:324:LYS:O	7:F:328:GLU:HG2	2.16	0.46
2:I:148:TYR:HB2	2:I:151:SER:O	2.15	0.46
3:A:190:ALA:HB2	3:A:200:LYS:CG	2.45	0.46
4:C:78:PRO:HB3	4:C:93:SER:O	2.15	0.46
4:C:79:VAL:HG22	4:C:80:PHE:CD2	2.50	0.46
4:C:252:SER:C	4:C:265:LYS:HG3	2.35	0.46
4:C:299:LYS:NZ	4:C:301:TYR:OH	2.41	0.46
4:C:685:MET:HE1	4:C:1073:LYS:HE2	1.98	0.46
5:D:85:CYS:O	5:D:89:GLY:HA2	2.15	0.46
5:D:130:MET:HE1	5:D:157:GLN:CB	2.40	0.46
5:D:550:VAL:HG23	5:D:552:ILE:HG23	1.98	0.46
8:G:54:DT:O2	8:G:55:DT:H1'	2.16	0.46
1:H:61:DG:H1'	1:H:62:DG:N7	2.30	0.46
2:I:169:PRO:HD2	2:I:208:ARG:HH22	1.80	0.46
3:A:85:LEU:HD21	3:A:130:ILE:HD13	1.96	0.46
3:A:92:VAL:HG12	3:A:121:VAL:HG22	1.97	0.46
3:B:85:LEU:HD23	3:B:85:LEU:HA	1.76	0.46
4:C:264:GLU:HB2	4:C:267:ARG:CD	2.42	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:1106:ARG:H	4:C:1106:ARG:HD2	1.81	0.46
5:D:688:ALA:O	5:D:692:ARG:HG3	2.15	0.46
5:D:868:TRP:CZ3	5:D:871:LEU:HD13	2.50	0.46
5:D:973:LEU:O	5:D:1003:LEU:HG	2.15	0.46
5:D:978:ARG:NH2	5:D:999:TYR:HB2	2.29	0.46
5:D:1067:ARG:HH22	5:D:1076:PRO:HD3	1.80	0.46
5:D:1082:ASP:OD1	5:D:1086:ASN:N	2.49	0.46
7:F:150:ARG:HB3	7:F:155:GLU:CB	2.45	0.46
1:H:14:DT:H2'	1:H:15:DG:O4'	2.15	0.46
2:J:88:LEU:HB2	2:J:156:LEU:HD23	1.98	0.46
2:J:113:LEU:HD23	2:J:132:LEU:CD1	2.43	0.46
4:C:67:GLU:O	4:C:102:LEU:HD12	2.15	0.46
4:C:100:LEU:CD1	4:C:122:VAL:HG11	2.44	0.46
4:C:260:LYS:HB3	4:C:262:TYR:HE1	1.80	0.46
4:C:935:THR:HG23	4:C:939:VAL:HG13	1.97	0.46
4:C:1022:LYS:HG3	4:C:1023:HIS:CD2	2.50	0.46
4:C:1105:SER:HB2	5:D:731:ARG:HG3	1.96	0.46
5:D:165:TYR:OH	5:D:169:LEU:HD22	2.15	0.46
5:D:665:GLN:O	5:D:669:GLN:HG2	2.15	0.46
5:D:722:ILE:O	5:D:722:ILE:HG12	2.15	0.46
7:F:414:LYS:O	7:F:418:LYS:HG3	2.16	0.46
7:F:575:GLU:HA	7:F:578:LYS:HZ1	1.80	0.46
3:K:254:LEU:HD12	3:K:254:LEU:H	1.81	0.46
4:C:270:THR:HG23	4:C:273:HIS:CE1	2.49	0.46
4:C:1157:GLN:HA	4:C:1157:GLN:HE21	1.81	0.46
5:D:34:SER:HA	5:D:102:MET:O	2.15	0.46
5:D:527:LEU:HB2	5:D:550:VAL:HG12	1.97	0.46
5:D:664:ILE:HD13	5:D:681:LYS:HG2	1.98	0.46
5:D:1167:LYS:HG3	5:D:1174:ARG:NE	2.29	0.46
5:D:1266:ILE:HD12	5:D:1274:PHE:H	1.78	0.46
7:F:414:LYS:HE3	7:F:434:TRP:CZ3	2.51	0.46
7:F:593:LYS:HB3	7:F:596:ARG:HH22	1.80	0.46
2:I:62:LEU:O	2:I:69:LEU:N	2.44	0.46
2:J:21:TYR:O	2:J:24:GLN:HB2	2.16	0.46
2:J:78:TYR:OH	2:J:82:ARG:NH1	2.43	0.46
3:A:187:VAL:CG2	3:A:199:ASP:HB3	2.45	0.46
4:C:38:PHE:CE1	4:C:461:GLU:HB2	2.50	0.46
4:C:214:ASN:OD1	4:C:359:ARG:HD2	2.16	0.46
4:C:544:GLY:N	4:C:546:GLU:OE2	2.48	0.46
4:C:882:ILE:HD11	4:C:919:ARG:NH2	2.31	0.46
5:D:62:PHE:O	5:D:98:ARG:HA	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:850:LYS:HD3	5:D:875:ASN:HD21	1.81	0.46
7:F:292:VAL:HG21	7:F:299:LYS:CB	2.46	0.46
1:H:42:DG:C1'	1:H:43:DG:C1'	2.80	0.46
2:I:82:ARG:NH1	2:J:94:VAL:HG13	2.22	0.46
3:K:320:ASN:O	3:K:320:ASN:ND2	2.49	0.46
3:A:225:ALA:HB3	3:B:232:VAL:HG11	1.98	0.46
4:C:17:LYS:N	4:C:17:LYS:HD2	2.30	0.46
4:C:145:ILE:HD13	4:C:512:SER:HA	1.97	0.46
5:D:194:LEU:O	5:D:198:CYS:HB2	2.16	0.46
5:D:857:LEU:HD11	5:D:872:LEU:CD2	2.45	0.46
5:D:1314:LEU:HD23	5:D:1326:GLN:OE1	2.16	0.46
7:F:284:GLU:HA	7:F:287:ILE:HG13	1.97	0.46
7:F:320:ILE:HG12	7:F:330:LEU:HB2	1.97	0.46
2:I:8:ARG:NH1	2:I:8:ARG:HB2	2.31	0.46
2:I:170:GLN:HG3	2:I:171:LEU:HD23	1.97	0.46
2:J:116:THR:HA	2:J:120:GLY:HA3	1.98	0.46
3:B:123:ILE:HG22	3:B:125:LYS:H	1.80	0.46
4:C:472:GLU:HA	4:C:475:VAL:CG1	2.45	0.46
4:C:624:ASP:OD2	4:C:628:HIS:HB2	2.15	0.46
5:D:611:ILE:CG2	5:D:612:LEU:HD12	2.44	0.46
5:D:930:LEU:HD13	5:D:1244:GLN:HB2	1.97	0.46
5:D:972:LYS:HZ2	5:D:974:VAL:HA	1.80	0.46
5:D:1016:THR:OG1	5:D:1019:ASN:ND2	2.49	0.46
7:F:111:LEU:HG	7:F:112:THR:O	2.16	0.46
7:F:339:ARG:O	7:F:342:GLN:HB3	2.16	0.46
7:F:397:ARG:NH2	8:G:26:DT:O4	2.45	0.46
8:G:3:DT:H1'	8:G:4:DG:C5'	2.45	0.46
2:I:12:THR:O	2:I:63:VAL:N	2.49	0.46
2:I:110:TRP:HH2	2:I:139:ILE:HD13	1.79	0.46
2:J:194:ASP:HA	2:J:197:LEU:CB	2.46	0.46
4:C:189:ASP:OD1	4:C:189:ASP:N	2.45	0.46
4:C:270:THR:H	4:C:273:HIS:CG	2.33	0.46
4:C:309:LEU:HD23	4:C:309:LEU:H	1.80	0.46
4:C:632:ASP:OD1	4:C:633:LEU:HD23	2.15	0.46
4:C:734:ILE:HD12	4:C:777:VAL:HG21	1.98	0.46
4:C:840:SER:O	4:C:1047:LEU:HB2	2.16	0.46
4:C:1007:LYS:O	4:C:1011:LEU:HG	2.15	0.46
5:D:789:LYS:HG3	5:D:931:THR:HG22	1.98	0.46
7:F:320:ILE:CA	7:F:327:SER:HB2	2.37	0.46
7:F:503:GLU:HB2	7:F:504:PRO:HD2	1.98	0.46
7:F:506:SER:O	7:F:509:THR:HG22	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:551:LEU:HD22	7:F:551:LEU:HA	1.80	0.46
7:F:561:MET:CE	7:F:576:VAL:HG22	2.42	0.46
2:I:11:MET:SD	2:I:36:PHE:HA	2.56	0.46
4:C:981:ALA:O	4:C:1002:LEU:HD11	2.16	0.46
5:D:44:ILE:HD13	5:D:252:LEU:HD23	1.98	0.46
5:D:216:LYS:HD2	5:D:217:LEU:N	2.31	0.46
5:D:530:PRO:HB2	5:D:581:MET:HE2	1.96	0.46
5:D:1012:ALA:HB3	5:D:1015:GLU:CB	2.46	0.46
5:D:1307:LEU:HG	5:D:1312:ALA:HB2	1.98	0.46
7:F:214:PRO:CB	7:F:218:ARG:HD3	2.46	0.46
7:F:232:ARG:NH1	7:F:233:ASP:HA	2.31	0.46
8:G:55:DT:H4'	8:G:56:DT:OP1	2.16	0.46
1:H:14:DT:OP2	7:F:584:ARG:NE	2.48	0.45
3:B:17:GLU:OE2	3:B:19:VAL:HG13	2.15	0.45
3:B:57:THR:C	3:B:173:VAL:HG12	2.37	0.45
3:B:107:ILE:HG23	3:B:134:THR:O	2.15	0.45
4:C:21:VAL:HG11	4:C:592:ARG:HD2	1.98	0.45
4:C:206:ALA:O	4:C:209:ILE:HG22	2.16	0.45
4:C:477:GLU:O	4:C:481:LEU:HB3	2.15	0.45
4:C:545:PHE:CE1	5:D:781:LYS:HD3	2.51	0.45
5:D:154:LEU:HA	5:D:158:GLN:NE2	2.30	0.45
5:D:1062:LEU:HD13	5:D:1066:GLU:O	2.15	0.45
6:E:30:MET:HE3	6:E:49:ILE:HG21	1.98	0.45
7:F:131:GLN:HB3	7:F:266:PHE:CZ	2.50	0.45
7:F:147:GLN:O	7:F:151:VAL:HG23	2.16	0.45
7:F:161:LEU:HG	7:F:162:ILE:HG23	1.98	0.45
7:F:298:PRO:HB2	7:F:301:ASN:ND2	2.30	0.45
2:I:82:ARG:NH2	7:F:578:LYS:HD2	2.31	0.45
3:A:187:VAL:HG23	3:A:199:ASP:HB3	1.98	0.45
4:C:494:ASN:HB3	4:C:497:PRO:HD2	1.97	0.45
4:C:689:ALA:HB1	4:C:1233:LEU:HD12	1.98	0.45
4:C:834:GLN:HE22	4:C:924:VAL:HG21	1.80	0.45
5:D:212:THR:O	5:D:216:LYS:HG3	2.16	0.45
5:D:253:VAL:HG11	7:F:523:ILE:HD12	1.99	0.45
5:D:390:LEU:CD2	5:D:407:VAL:HG11	2.46	0.45
5:D:398:LYS:HD3	7:F:532:LEU:HD21	1.98	0.45
5:D:872:LEU:HD23	5:D:872:LEU:HA	1.59	0.45
5:D:1167:LYS:HE3	5:D:1170:LYS:HD3	1.97	0.45
7:F:231:THR:HG21	7:F:252:LEU:CB	2.46	0.45
7:F:348:GLU:HB2	7:F:353:LEU:O	2.16	0.45
2:I:8:ARG:NH2	2:I:10:VAL:HB	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:59:VAL:HG23	3:B:171:LEU:HB2	1.99	0.45
4:C:255:ILE:CG2	4:C:263:VAL:H	2.28	0.45
4:C:368:ARG:HG3	4:C:368:ARG:O	2.15	0.45
4:C:1099:ASN:OD1	4:C:1100:PRO:HD2	2.16	0.45
5:D:114:ILE:O	5:D:114:ILE:HD13	2.16	0.45
5:D:423:LEU:HB3	5:D:466:MET:CE	2.46	0.45
5:D:959:LYS:CE	5:D:985:ILE:HG13	2.46	0.45
5:D:1161:GLY:HA3	5:D:1178:THR:O	2.16	0.45
1:H:37:DA:N6	7:F:420:GLU:HB3	2.21	0.45
3:B:103:ASN:HB2	3:B:141:SER:OG	2.16	0.45
4:C:119:GLU:HB2	4:C:489:PRO:HG2	1.98	0.45
5:D:700:ASN:O	5:D:704:GLU:HG2	2.16	0.45
5:D:1029:THR:OG1	5:D:1121:LEU:HD21	2.16	0.45
5:D:1080:ILE:O	5:D:1088:VAL:HG12	2.17	0.45
5:D:1103:GLY:O	5:D:1124:ILE:HG13	2.15	0.45
5:D:1159:ILE:HD12	5:D:1160:SER:H	1.81	0.45
5:D:1211:SER:OG	5:D:1212:ASP:N	2.49	0.45
6:E:8:ASP:HA	6:E:11:GLU:OE1	2.16	0.45
7:F:150:ARG:NH1	7:F:155:GLU:OE2	2.50	0.45
7:F:287:ILE:HG22	7:F:302:PHE:HE1	1.82	0.45
7:F:341:LEU:CB	7:F:344:LEU:HD21	2.45	0.45
7:F:354:THR:HG23	7:F:357:GLN:H	1.81	0.45
7:F:585:GLU:HG2	7:F:588:ARG:HD2	1.97	0.45
8:G:34:DT:H2"	8:G:35:DT:C5'	2.47	0.45
2:I:21:TYR:HB3	2:I:60:PRO:HD2	1.98	0.45
2:J:18:THR:HG23	2:J:207:MET:CE	2.47	0.45
2:J:129:ARG:HG3	2:J:173:ILE:HG12	1.98	0.45
2:J:137:LEU:HB3	2:J:179:GLY:CA	2.46	0.45
4:C:136:PHE:O	4:C:142:GLU:HA	2.17	0.45
4:C:239:MET:HE3	4:C:241:LEU:HD13	1.97	0.45
4:C:1103:VAL:HG11	4:C:1112:ILE:HD11	1.99	0.45
4:C:1335:ILE:HD12	5:D:1336:ALA:CB	2.47	0.45
5:D:306:LEU:O	5:D:326:SER:HB2	2.16	0.45
5:D:706:VAL:HG12	5:D:715:LYS:CB	2.43	0.45
5:D:958:ILE:HG22	5:D:960:LEU:CD2	2.42	0.45
5:D:1032:SER:OG	5:D:1033:GLY:N	2.48	0.45
5:D:1084:GLN:OE1	5:D:1084:GLN:N	2.49	0.45
6:E:70:GLN:O	6:E:74:GLU:HG2	2.17	0.45
7:F:157:ARG:HG2	7:F:160:ASP:OD2	2.16	0.45
2:J:161:LEU:HA	2:J:164:LEU:HB3	1.98	0.45
4:C:284:LEU:HD12	4:C:285:ILE:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:591:TYR:OH	4:C:637:ARG:NH2	2.49	0.45
4:C:690:VAL:HG13	4:C:691:PRO:HD2	1.97	0.45
4:C:992:LEU:HD23	4:C:997:TRP:HE1	1.82	0.45
4:C:1095:ASP:C	4:C:1096:ILE:HG12	2.36	0.45
4:C:1336:ASN:HB3	5:D:23:ALA:O	2.16	0.45
7:F:228:TYR:CE2	7:F:229:VAL:HG13	2.52	0.45
2:I:50:LEU:O	2:I:54:ASN:HB3	2.17	0.45
2:I:126:ASP:HA	2:I:129:ARG:NH1	2.32	0.45
2:I:183:LEU:HG	2:I:187:MET:CE	2.46	0.45
3:A:112:ALA:O	3:A:115:ILE:HG13	2.17	0.45
3:B:47:LEU:HD21	3:B:220:ALA:CB	2.46	0.45
4:C:10:ARG:NH2	4:C:793:GLU:OE1	2.49	0.45
4:C:216:THR:OG1	4:C:217:THR:N	2.50	0.45
4:C:937:ASP:HB2	4:C:1039:GLY:HA3	1.98	0.45
5:D:24:LEU:HD12	5:D:24:LEU:HA	1.70	0.45
5:D:35:PHE:CD2	5:D:101:ARG:HD3	2.52	0.45
5:D:113:HIS:CE1	5:D:307:LEU:HD13	2.52	0.45
5:D:1087:ASP:OD1	5:D:1087:ASP:N	2.43	0.45
7:F:151:VAL:CG2	7:F:156:ALA:HB3	2.46	0.45
8:G:30:DA:H3'	8:G:30:DA:P	2.57	0.45
2:I:46:PRO:HG2	2:I:51:ILE:CD1	2.42	0.45
2:J:23:HIS:CD2	2:J:27:ILE:HD11	2.51	0.45
4:C:223:LEU:HD13	4:C:426:ILE:HD13	1.99	0.45
4:C:841:ARG:HD3	4:C:1046:VAL:HG23	1.99	0.45
4:C:887:VAL:CG2	4:C:913:VAL:HG21	2.47	0.45
4:C:1268:GLN:NE2	4:C:1268:GLN:HA	2.32	0.45
7:F:141:ILE:O	7:F:141:ILE:HG22	2.17	0.45
7:F:586:ARG:NE	7:F:590:ILE:HG12	2.31	0.45
1:H:55:DG:C2'	1:H:56:DA:H5"	2.45	0.45
2:J:134:GLU:HA	2:J:137:LEU:HD11	1.98	0.45
2:J:190:VAL:HG13	2:J:191:PHE:HD1	1.81	0.45
3:A:62:ASP:OD1	3:A:63:GLY:N	2.50	0.45
4:C:232:ILE:CG2	4:C:237:LEU:HD23	2.45	0.45
4:C:672:GLU:HG2	4:C:673:HIS:HD2	1.82	0.45
4:C:699:LEU:HD22	4:C:699:LEU:HA	1.78	0.45
4:C:975:ILE:O	4:C:979:LEU:HB2	2.17	0.45
5:D:1168:GLU:HG3	5:D:1173:ARG:HG2	1.99	0.45
7:F:312:SER:OG	7:F:314:THR:HG23	2.16	0.45
7:F:512:GLY:O	7:F:513:ASP:HB2	2.17	0.45
1:H:23:DT:OP2	1:H:23:DT:H71	2.17	0.45
1:H:62:DG:H1'	1:H:63:DG:H5'	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:44:ASP:OD1	2:I:45:ASN:N	2.50	0.45
3:A:12:ARG:HB3	3:A:12:ARG:HH11	1.82	0.45
4:C:34:SER:O	4:C:457:GLY:HA3	2.17	0.45
4:C:270:THR:H	4:C:273:HIS:HB2	1.81	0.45
4:C:299:LYS:NZ	4:C:301:TYR:CZ	2.84	0.45
4:C:609:ILE:HD12	4:C:610:GLU:N	2.31	0.45
5:D:317:THR:HG23	5:D:320:ASN:HB3	1.99	0.45
5:D:959:LYS:O	5:D:983:LYS:HB3	2.17	0.45
7:F:286:LEU:O	7:F:290:LEU:HB2	2.17	0.45
7:F:399:LEU:HD12	7:F:399:LEU:HA	1.79	0.45
7:F:493:LYS:O	7:F:497:VAL:HG23	2.17	0.45
2:J:112:THR:O	2:J:115:ASN:HB2	2.16	0.44
4:C:106:GLU:HG2	4:C:109:ALA:CB	2.40	0.44
4:C:321:LEU:O	4:C:325:LEU:N	2.49	0.44
4:C:759:SER:OG	4:C:760:ASN:N	2.48	0.44
4:C:1105:SER:HB2	5:D:731:ARG:HD2	1.99	0.44
5:D:839:VAL:CG2	5:D:882:VAL:HG11	2.47	0.44
7:F:268:TYR:O	7:F:272:SER:N	2.50	0.44
7:F:602:SER:HA	7:F:605:GLU:HB2	1.98	0.44
1:H:18:DA:C4'	1:H:19:DA:H5'	2.47	0.44
2:I:32:LYS:NZ	2:I:86:PRO:O	2.24	0.44
2:J:201:THR:HG23	2:J:204:GLU:OE2	2.18	0.44
4:C:22:LEU:HB3	4:C:655:VAL:HG11	1.99	0.44
4:C:1002:LEU:CD2	4:C:1007:LYS:HD3	2.45	0.44
4:C:1004:ASP:CA	4:C:1008:GLN:HG2	2.36	0.44
5:D:977:SER:OG	5:D:978:ARG:N	2.50	0.44
5:D:981:GLU:HA	5:D:995:TYR:O	2.17	0.44
5:D:1327:GLU:HA	8:G:12:DG:OP1	2.16	0.44
7:F:113:ARG:HB2	7:F:426:LYS:CE	2.48	0.44
7:F:131:GLN:HG3	7:F:131:GLN:H	1.66	0.44
7:F:139:GLU:HA	7:F:142:THR:CG2	2.47	0.44
7:F:142:THR:HA	7:F:145:LEU:HD21	1.99	0.44
7:F:143:TYR:O	7:F:147:GLN:HG2	2.16	0.44
7:F:227:GLN:O	7:F:231:THR:HG23	2.18	0.44
7:F:275:VAL:HG13	7:F:278:ASP:OD2	2.17	0.44
7:F:299:LYS:O	7:F:303:ILE:HG23	2.18	0.44
7:F:309:ASN:O	7:F:355:ILE:HB	2.17	0.44
7:F:324:LYS:HB3	7:F:325:PRO:HD2	1.99	0.44
2:I:54:ASN:ND2	2:I:57:GLN:HA	2.32	0.44
2:I:165:LEU:HB3	2:I:191:PHE:HZ	1.82	0.44
2:J:23:HIS:HA	2:J:26:ARG:NH1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:J:88:LEU:CB	2:J:156:LEU:HD23	2.48	0.44
2:J:191:PHE:HA	2:J:196:PHE:CD2	2.51	0.44
3:A:79:LEU:HD21	4:C:831:ILE:HD11	1.98	0.44
3:A:218:ARG:HG2	3:B:231:PHE:O	2.18	0.44
3:B:95:LYS:HE2	3:B:95:LYS:HB3	1.73	0.44
3:B:101:THR:O	3:B:116:THR:HG23	2.17	0.44
3:B:159:ILE:HA	3:B:162:GLU:HB2	1.99	0.44
4:C:102:LEU:O	4:C:116:ASP:HA	2.16	0.44
5:D:1080:ILE:HG22	5:D:1088:VAL:HG11	1.99	0.44
7:F:359:LYS:O	7:F:362:ASN:ND2	2.49	0.44
7:F:600:HIS:HB3	7:F:603:ARG:HH21	1.83	0.44
5:D:355:ILE:HG12	5:D:464:ASP:O	2.17	0.44
5:D:591:ILE:CG2	5:D:592:VAL:HG13	2.47	0.44
5:D:680:ASN:N	5:D:680:ASN:OD1	2.50	0.44
5:D:972:LYS:HZ3	5:D:1028:ILE:HD13	1.83	0.44
5:D:1144:LEU:CD2	5:D:1237:VAL:HG23	2.46	0.44
6:E:34:GLY:O	6:E:35:LYS:HD3	2.18	0.44
8:G:52:DC:H5'	8:G:52:DC:C6	2.49	0.44
1:H:60:DA:H2	8:G:3:DT:H3	1.64	0.44
1:H:63:DG:H4'	5:D:1170:LYS:HD2	2.00	0.44
2:I:54:ASN:HD21	2:I:58:SER:H	1.66	0.44
2:I:161:LEU:O	2:I:165:LEU:N	2.50	0.44
3:A:152:TYR:HD1	3:A:176:CYS:HB3	1.82	0.44
3:A:236:ASP:OD1	3:A:236:ASP:N	2.49	0.44
3:B:95:LYS:HZ1	3:B:98:VAL:HA	1.83	0.44
3:B:205:MET:CE	3:B:217:ILE:HG13	2.48	0.44
4:C:74:ARG:NH1	4:C:121:GLU:OE1	2.51	0.44
4:C:188:PHE:CE1	4:C:194:LEU:HD12	2.51	0.44
5:D:72:CYS:SG	5:D:74:LYS:HG3	2.58	0.44
5:D:655:SER:HA	5:D:658:GLU:HB3	1.99	0.44
5:D:843:VAL:CG2	5:D:883:ARG:HB2	2.48	0.44
5:D:1042:ASP:HB3	5:D:1048:ARG:CZ	2.47	0.44
7:F:346:GLN:O	7:F:350:GLU:HG3	2.17	0.44
7:F:474:MET:HE3	7:F:474:MET:HB2	1.87	0.44
1:H:53:DC:H2"	1:H:54:DG:C5'	2.47	0.44
2:J:10:VAL:CG1	2:J:65:ARG:HG2	2.47	0.44
3:A:175:ALA:HB1	3:A:177:TYR:CE1	2.52	0.44
4:C:490:GLN:HG3	7:F:472:GLN:HG2	2.00	0.44
4:C:496:LYS:HB3	4:C:497:PRO:HD3	1.99	0.44
4:C:730:SER:O	4:C:730:SER:OG	2.35	0.44
4:C:1042:LEU:HD13	4:C:1046:VAL:CG1	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:1053:TYR:C	4:C:1054:LEU:HD12	2.38	0.44
4:C:1225:VAL:HG13	5:D:638:SER:HB2	1.98	0.44
5:D:474:LEU:HD12	5:D:474:LEU:O	2.18	0.44
5:D:603:LYS:HE3	5:D:603:LYS:HB3	1.75	0.44
5:D:638:SER:OG	5:D:639:VAL:N	2.50	0.44
5:D:670:SER:HB2	5:D:672:LEU:CD1	2.48	0.44
5:D:872:LEU:HD22	5:D:877:VAL:HG12	1.99	0.44
5:D:1314:LEU:HD23	5:D:1326:GLN:CD	2.38	0.44
7:F:278:ASP:HB3	7:F:281:ARG:HH12	1.82	0.44
2:I:31:GLU:HG3	2:I:195:SER:HB3	2.00	0.44
3:A:43:LEU:HA	3:A:43:LEU:HD23	1.71	0.44
3:B:103:ASN:OD1	3:B:141:SER:HB2	2.17	0.44
4:C:239:MET:HG2	4:C:287:VAL:HG11	1.98	0.44
4:C:849:GLU:OE1	4:C:851:THR:OG1	2.36	0.44
4:C:1339:LEU:HD13	5:D:17:PHE:CD2	2.53	0.44
5:D:279:LEU:O	5:D:283:LEU:HD13	2.17	0.44
7:F:136:GLU:OE2	7:F:361:ILE:HA	2.18	0.44
7:F:247:GLU:O	7:F:251:LYS:HG3	2.17	0.44
7:F:347:ILE:O	7:F:350:GLU:HB2	2.18	0.44
1:H:42:DG:H5'	7:F:385:ARG:HG2	1.99	0.44
2:J:174:GLU:HG3	2:J:175:PHE:N	2.33	0.44
3:K:262:LEU:HG	3:K:267:ALA:HB2	2.00	0.44
4:C:975:ILE:CG2	4:C:1010:GLN:HG2	2.46	0.44
5:D:1095:MET:SD	5:D:1096:PRO:HD2	2.57	0.44
5:D:1167:LYS:NZ	5:D:1170:LYS:HD3	2.33	0.44
7:F:122:ARG:O	7:F:371:LYS:NZ	2.50	0.44
8:G:51:DT:H2"	8:G:52:DC:H6	1.83	0.44
1:H:18:DA:H4'	1:H:19:DA:OP1	2.18	0.44
2:J:88:LEU:O	2:J:156:LEU:HB2	2.18	0.44
3:B:12:ARG:O	3:B:13:LEU:HB3	2.18	0.44
4:C:465:ARG:HG3	4:C:466:VAL:N	2.33	0.44
4:C:988:LYS:HA	4:C:991:LYS:CG	2.47	0.44
4:C:1002:LEU:HD12	4:C:1002:LEU:HA	1.79	0.44
4:C:1242:LYS:HD2	5:D:465:GLN:HE22	1.81	0.44
4:C:1275:VAL:O	4:C:1279:GLU:HG3	2.18	0.44
5:D:929:GLN:O	5:D:929:GLN:HG2	2.18	0.44
5:D:1029:THR:HG21	5:D:1117:SER:HA	2.00	0.44
5:D:1031:VAL:HG13	5:D:1080:ILE:CG2	2.42	0.44
7:F:296:LYS:O	7:F:296:LYS:HG3	2.17	0.44
7:F:588:ARG:H	7:F:588:ARG:HG2	1.53	0.44
2:I:8:ARG:HH22	2:I:10:VAL:HB	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:104:LYS:N	3:B:140:ILE:O	2.47	0.43
4:C:883:LEU:HD11	4:C:920:VAL:HG22	1.99	0.43
4:C:1211:ARG:HD3	4:C:1220:GLN:NE2	2.33	0.43
5:D:26:SER:HB3	5:D:236:TRP:CZ2	2.53	0.43
5:D:199:GLU:HA	5:D:202:ARG:CG	2.47	0.43
5:D:682:VAL:HA	5:D:685:ILE:HG22	1.99	0.43
5:D:816:THR:HG23	5:D:818:GLU:OE2	2.18	0.43
5:D:981:GLU:HB3	5:D:996:LYS:HE2	2.00	0.43
5:D:1138:LEU:HB3	5:D:1139:PRO:HD3	1.99	0.43
7:F:166:VAL:HG23	7:F:258:GLN:HG2	2.00	0.43
7:F:354:THR:HG23	7:F:356:GLU:H	1.83	0.43
7:F:576:VAL:O	7:F:579:GLN:HB3	2.18	0.43
8:G:5:DC:C2'	8:G:6:DA:H5'	2.43	0.43
1:H:63:DG:H5"	5:D:1170:LYS:CG	2.46	0.43
2:I:43:LYS:HD2	2:I:43:LYS:H	1.83	0.43
3:B:15:ASP:HB3	3:B:27:THR:HG23	1.99	0.43
4:C:61:SER:HG	4:C:65:ASN:H	1.64	0.43
4:C:296:VAL:HA	4:C:316:GLU:HA	2.00	0.43
4:C:478:ARG:NH1	4:C:487:LEU:HD13	2.33	0.43
4:C:906:PHE:CD2	7:F:611:LEU:HD11	2.53	0.43
5:D:1080:ILE:HB	5:D:1097:ALA:HB3	1.99	0.43
5:D:1358:PRO:HB3	5:D:1366:HIS:CD2	2.53	0.43
6:E:73:GLN:O	6:E:76:GLU:HB3	2.18	0.43
7:F:275:VAL:HA	7:F:278:ASP:OD2	2.18	0.43
7:F:299:LYS:HA	7:F:302:PHE:CE2	2.52	0.43
7:F:530:LEU:HD22	7:F:532:LEU:HB3	1.99	0.43
1:H:44:DG:H2"	1:H:45:DA:C8	2.53	0.43
1:H:49:DG:C5	4:C:151:ARG:HD2	2.53	0.43
2:J:14:PHE:CG	2:J:50:LEU:HD13	2.53	0.43
2:J:137:LEU:HB3	2:J:179:GLY:HA3	1.98	0.43
3:A:44:ARG:O	3:A:44:ARG:HG2	2.17	0.43
3:A:234:LEU:HD23	3:A:234:LEU:HA	1.89	0.43
3:B:19:VAL:HG23	3:B:23:HIS:HD2	1.82	0.43
3:B:107:ILE:HD11	3:B:136:GLU:H	1.82	0.43
4:C:119:GLU:HG2	4:C:489:PRO:O	2.18	0.43
4:C:225:PHE:CZ	4:C:345:PRO:HA	2.54	0.43
4:C:836:LEU:HB3	4:C:918:LEU:HD21	2.00	0.43
4:C:898:GLU:OE1	4:C:898:GLU:N	2.51	0.43
5:D:208:THR:HG23	5:D:213:LYS:HE3	1.99	0.43
5:D:423:LEU:HB3	5:D:466:MET:HE1	1.99	0.43
5:D:1280:VAL:HG11	5:D:1304:ARG:NH2	2.29	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:F:354:THR:CG2	7:F:357:GLN:HG3	2.47	0.43
2:J:175:PHE:HD2	2:J:184:LYS:HG2	1.82	0.43
3:B:65:LEU:HA	3:B:169:GLY:HA3	2.00	0.43
4:C:163:LYS:NZ	4:C:164:THR:HA	2.33	0.43
4:C:268:ARG:HD2	4:C:269:ILE:O	2.17	0.43
4:C:510:GLN:OE1	4:C:510:GLN:N	2.51	0.43
4:C:811:ASN:O	4:C:1099:ASN:ND2	2.51	0.43
1:H:11:DG:H2"	1:H:12:DA:O5'	2.19	0.43
2:I:17:PRO:HG3	2:I:40:HIS:C	2.39	0.43
2:I:47:PRO:HG2	2:I:50:LEU:HB2	2.01	0.43
2:I:113:LEU:CD2	2:I:132:LEU:HD13	2.49	0.43
2:J:41:VAL:HB	2:J:45:ASN:C	2.38	0.43
2:J:200:LEU:HA	2:J:204:GLU:OE2	2.18	0.43
3:A:98:VAL:HG11	3:A:121:VAL:HG21	1.99	0.43
4:C:253:PHE:O	4:C:255:ILE:HD12	2.19	0.43
4:C:637:ARG:HG3	4:C:637:ARG:O	2.19	0.43
4:C:1022:LYS:HG3	4:C:1023:HIS:HD2	1.83	0.43
4:C:1148:ALA:HB1	4:C:1180:MET:CE	2.49	0.43
5:D:275:ARG:NE	7:F:403:ASP:OD2	2.48	0.43
5:D:789:LYS:HG3	5:D:931:THR:CG2	2.49	0.43
5:D:959:LYS:CD	5:D:985:ILE:HG13	2.48	0.43
7:F:122:ARG:HG2	7:F:371:LYS:HZ3	1.83	0.43
7:F:298:PRO:HB2	7:F:301:ASN:OD1	2.19	0.43
7:F:412:LEU:HB2	7:F:435:ILE:HD11	2.01	0.43
1:H:26:DT:H2"	1:H:27:DA:OP2	2.19	0.43
4:C:818:VAL:HG12	4:C:819:SER:O	2.18	0.43
4:C:1020:GLU:O	4:C:1024:GLU:CB	2.67	0.43
4:C:1319:MET:CG	4:C:1320:PRO:HD2	2.48	0.43
5:D:197:GLU:O	5:D:201:LEU:HB2	2.19	0.43
5:D:654:ILE:HD11	5:D:743:MET:SD	2.58	0.43
5:D:870:ASP:HA	5:D:873:GLU:CB	2.48	0.43
5:D:955:LYS:CG	5:D:1010:GLN:HB3	2.48	0.43
5:D:1031:VAL:O	5:D:1080:ILE:HG21	2.17	0.43
7:F:586:ARG:HE	7:F:590:ILE:HG12	1.84	0.43
2:I:17:PRO:HD3	2:I:41:VAL:O	2.19	0.43
2:I:116:THR:O	2:I:120:GLY:N	2.51	0.43
2:I:132:LEU:HD23	2:I:173:ILE:CD1	2.49	0.43
2:I:183:LEU:HG	2:I:187:MET:HE2	2.00	0.43
2:I:183:LEU:HD12	2:I:183:LEU:O	2.19	0.43
4:C:15:PHE:CD2	4:C:1190:ALA:HB2	2.53	0.43
4:C:198:ILE:CG2	4:C:199:ASP:N	2.73	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:299:LYS:HZ2	4:C:299:LYS:H	1.67	0.43
4:C:421:SER:OG	4:C:422:LYS:N	2.52	0.43
5:D:177:ASP:OD2	5:D:179:LYS:HE3	2.19	0.43
5:D:201:LEU:HA	5:D:204:GLU:OE1	2.19	0.43
5:D:552:ILE:HD11	5:D:570:LYS:CG	2.42	0.43
2:I:27:ILE:HD11	2:I:163:PRO:CG	2.48	0.43
3:A:222:THR:HG22	3:B:232:VAL:HB	2.00	0.43
4:C:50:GLU:OE1	4:C:70:TYR:OH	2.37	0.43
4:C:1122:LYS:NZ	4:C:1178:LYS:O	2.29	0.43
5:D:17:PHE:CZ	5:D:1353:VAL:HG11	2.48	0.43
5:D:18:ASP:OD1	5:D:18:ASP:N	2.51	0.43
5:D:322:ARG:CG	5:D:323:PRO:HD2	2.39	0.43
5:D:552:ILE:HD12	5:D:589:TYR:CE1	2.53	0.43
5:D:861:ASN:N	5:D:861:ASN:OD1	2.52	0.43
5:D:869:CYS:O	5:D:873:GLU:N	2.52	0.43
5:D:999:TYR:CD2	5:D:1027:VAL:HA	2.54	0.43
5:D:1158:GLU:HG2	5:D:1186:TYR:OH	2.18	0.43
7:F:507:MET:SD	7:F:523:ILE:HD11	2.59	0.43
1:H:44:DG:C1'	1:H:45:DA:H5'	2.48	0.43
4:C:106:GLU:HB2	4:C:114:VAL:HG21	2.00	0.43
4:C:616:ILE:HA	4:C:652:TYR:O	2.19	0.43
4:C:1264:GLN:HA	4:C:1264:GLN:HE21	1.83	0.43
5:D:500:ILE:HG22	5:D:500:ILE:O	2.18	0.43
5:D:833:GLU:CG	5:D:838:ARG:HG3	2.49	0.43
5:D:1029:THR:N	5:D:1119:ASP:O	2.51	0.43
5:D:1268:ASN:HA	5:D:1274:PHE:CE1	2.53	0.43
7:F:306:PHE:HZ	7:F:341:LEU:HD22	1.84	0.43
7:F:373:ARG:O	7:F:377:LYS:HG3	2.18	0.43
7:F:572:THR:HB	7:F:575:GLU:HB2	2.01	0.43
1:H:20:DA:H2"	1:H:21:DA:H8	1.84	0.43
2:J:12:THR:O	2:J:62:LEU:HD12	2.18	0.43
2:J:133:ARG:CA	2:J:136:LEU:HG	2.45	0.43
2:J:190:VAL:HG13	2:J:191:PHE:CD1	2.54	0.43
4:C:22:LEU:HD12	4:C:23:ASP:H	1.84	0.43
4:C:272:ARG:O	4:C:276:GLN:HG3	2.18	0.43
4:C:1298:VAL:CG2	4:C:1321:GLU:HG3	2.48	0.43
4:C:1338:GLU:C	4:C:1339:LEU:HD23	2.38	0.43
5:D:1051:ASP:OD2	5:D:1057:SER:HA	2.19	0.43
7:F:213:ASP:HB2	7:F:216:LEU:HD11	2.00	0.43
3:B:182:ARG:HG2	3:B:183:ILE:N	2.33	0.42
4:C:4:SER:O	4:C:7:GLU:N	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:39:ILE:HG13	4:C:39:ILE:O	2.19	0.42
4:C:109:ALA:HB1	4:C:110:PRO:HD2	2.00	0.42
4:C:145:ILE:HB	4:C:456:VAL:HG22	2.00	0.42
4:C:241:LEU:HD21	4:C:246:LEU:HD11	1.99	0.42
5:D:527:LEU:CD2	5:D:548:VAL:HG21	2.49	0.42
5:D:596:LEU:HA	5:D:596:LEU:HD12	1.82	0.42
5:D:827:GLU:N	5:D:830:ASP:O	2.47	0.42
5:D:957:SER:O	5:D:985:ILE:HG12	2.19	0.42
5:D:1037:PHE:HD1	5:D:1037:PHE:HA	1.74	0.42
5:D:1044:GLN:OE1	5:D:1074:LEU:HD11	2.19	0.42
7:F:102:MET:HE1	7:F:388:ILE:HD13	2.00	0.42
7:F:157:ARG:HG3	7:F:159:SER:H	1.83	0.42
7:F:287:ILE:HG22	7:F:302:PHE:CE1	2.54	0.42
7:F:495:ARG:O	7:F:499:LYS:HE3	2.19	0.42
8:G:12:DG:C2'	8:G:13:DA:H5'	2.49	0.42
2:J:48:GLN:O	2:J:51:ILE:HG23	2.19	0.42
3:B:83:LEU:HD21	5:D:526:VAL:CG2	2.48	0.42
3:B:83:LEU:HD13	5:D:528:THR:HB	2.01	0.42
4:C:210:LEU:HB3	4:C:220:ILE:HD12	2.01	0.42
4:C:268:ARG:CZ	4:C:270:THR:HA	2.49	0.42
4:C:637:ARG:HA	4:C:641:GLU:O	2.19	0.42
4:C:699:LEU:HB2	4:C:799:ASN:ND2	2.32	0.42
5:D:213:LYS:CA	5:D:216:LYS:HE3	2.42	0.42
5:D:487:THR:OG1	6:E:5:THR:HG22	2.19	0.42
5:D:793:SER:O	5:D:797:THR:HG22	2.19	0.42
7:F:142:THR:HA	7:F:145:LEU:CG	2.48	0.42
2:I:13:LEU:HD12	2:I:14:PHE:N	2.34	0.42
2:I:17:PRO:HB3	2:I:40:HIS:HB3	2.00	0.42
2:I:17:PRO:HA	2:I:40:HIS:ND1	2.34	0.42
2:I:170:GLN:HG3	2:I:171:LEU:HD22	2.00	0.42
2:J:16:GLY:H	2:J:22:SER:CB	2.32	0.42
2:J:29:LEU:O	2:J:34:VAL:HG12	2.20	0.42
3:A:8:PHE:HD1	3:A:8:PHE:HA	1.69	0.42
3:A:14:VAL:HG13	3:A:15:ASP:OD1	2.20	0.42
3:A:190:ALA:CB	3:A:200:LYS:HG3	2.47	0.42
4:C:144:VAL:HG21	4:C:515:MET:HG3	2.01	0.42
4:C:609:ILE:CD1	4:C:610:GLU:HG3	2.45	0.42
4:C:985:GLU:HA	4:C:988:LYS:CG	2.50	0.42
4:C:1020:GLU:O	4:C:1024:GLU:CG	2.67	0.42
4:C:1203:ASP:OD1	4:C:1203:ASP:N	2.50	0.42
5:D:228:VAL:HG13	5:D:229:GLN:H	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:582:ILE:HG23	5:D:623:GLN:HB3	2.00	0.42
5:D:759:ILE:CG2	5:D:771:GLN:HB3	2.49	0.42
5:D:883:ARG:NH2	5:D:898:CYS:SG	2.93	0.42
7:F:135:ALA:HB1	7:F:253:SER:HB2	2.01	0.42
7:F:141:ILE:HD11	7:F:252:LEU:HD11	2.01	0.42
7:F:160:ASP:OD1	7:F:160:ASP:N	2.52	0.42
8:G:27:DA:H1'	8:G:28:DG:H5'	2.00	0.42
2:I:46:PRO:HB2	2:I:50:LEU:HD23	2.00	0.42
2:I:168:LEU:O	2:I:173:ILE:HB	2.20	0.42
4:C:17:LYS:NZ	4:C:1194:GLU:OE2	2.34	0.42
4:C:580:GLN:O	4:C:588:GLU:HG2	2.19	0.42
5:D:999:TYR:CE2	5:D:1027:VAL:HA	2.54	0.42
5:D:999:TYR:HE2	5:D:1028:ILE:H	1.68	0.42
7:F:559:LEU:HD12	7:F:559:LEU:HA	1.74	0.42
2:J:110:TRP:O	2:J:113:LEU:HB3	2.20	0.42
3:A:192:VAL:HB	3:A:198:LEU:HD12	2.02	0.42
4:C:264:GLU:OE1	4:C:264:GLU:N	2.51	0.42
4:C:296:VAL:CG2	4:C:314:ASN:HA	2.49	0.42
4:C:373:GLY:CA	7:F:94:THR:HB	2.48	0.42
4:C:1157:GLN:HA	4:C:1157:GLN:NE2	2.33	0.42
5:D:1047:THR:O	5:D:1049:GLN:HG3	2.19	0.42
5:D:1053:LEU:HD22	5:D:1053:LEU:H	1.84	0.42
5:D:1062:LEU:HB3	5:D:1066:GLU:O	2.18	0.42
5:D:1156:LEU:HD13	5:D:1156:LEU:HA	1.89	0.42
6:E:60:ASN:OD1	6:E:63:ILE:HG13	2.20	0.42
7:F:163:THR:OG1	7:F:260:ARG:HD3	2.20	0.42
1:H:38:DT:H4'	7:F:425:TYR:CE2	2.55	0.42
3:K:283:GLN:NE2	3:K:318:LEU:O	2.52	0.42
4:C:122:VAL:HG21	4:C:493:ILE:HG21	2.00	0.42
4:C:138:ILE:HD13	4:C:138:ILE:HA	1.74	0.42
4:C:672:GLU:HB3	4:C:1187:PHE:CE1	2.54	0.42
4:C:864:LYS:HD2	4:C:875:ALA:HB1	2.02	0.42
4:C:1210:ILE:HG22	4:C:1211:ARG:H	1.83	0.42
5:D:1031:VAL:HG21	5:D:1088:VAL:CG2	2.42	0.42
2:J:108:LYS:HE3	2:J:108:LYS:HB3	1.82	0.42
3:B:197:ASP:C	3:B:198:LEU:HD22	2.40	0.42
4:C:135:THR:OG1	4:C:142:GLU:HB3	2.19	0.42
4:C:473:ARG:HB2	4:C:473:ARG:CZ	2.49	0.42
4:C:590:PRO:HB2	4:C:655:VAL:HG21	2.02	0.42
4:C:877:VAL:HG21	4:C:920:VAL:HG21	2.01	0.42
4:C:1200:LYS:HE3	4:C:1200:LYS:HB2	1.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:E:72:GLN:O	6:E:76:GLU:N	2.52	0.42
7:F:166:VAL:HG12	7:F:260:ARG:CZ	2.50	0.42
7:F:234:THR:OG1	7:F:245:ALA:HA	2.20	0.42
7:F:589:GLN:HB3	7:F:593:LYS:NZ	2.35	0.42
7:F:593:LYS:HA	7:F:596:ARG:HH12	1.84	0.42
7:F:596:ARG:O	7:F:599:ARG:HB3	2.19	0.42
2:J:208:ARG:HG2	2:J:209:LEU:H	1.83	0.42
3:A:95:LYS:NZ	3:A:120:ASP:OD2	2.53	0.42
3:A:186:ASN:OD1	3:A:186:ASN:N	2.52	0.42
3:B:9:LEU:HD12	3:B:195:ARG:NH2	2.34	0.42
4:C:808:ASN:ND2	4:C:1216:ARG:HH22	2.18	0.42
4:C:1291:LEU:HD21	5:D:1351:VAL:HG22	2.01	0.42
5:D:573:THR:OG1	5:D:575:GLY:N	2.52	0.42
5:D:826:ILE:HD11	5:D:991:THR:HG21	2.00	0.42
6:E:38:LEU:HB3	6:E:58:LEU:HD23	2.02	0.42
7:F:286:LEU:CD2	7:F:290:LEU:HB2	2.50	0.42
7:F:354:THR:O	7:F:358:VAL:HG23	2.19	0.42
7:F:470:MET:CE	7:F:486:ARG:HD2	2.50	0.42
1:H:11:DG:H2"	1:H:12:DA:H5"	2.02	0.42
5:D:133:ARG:HA	5:D:133:ARG:HD2	1.77	0.42
5:D:210:SER:CB	5:D:213:LYS:HB2	2.46	0.42
5:D:256:ASP:OD1	5:D:256:ASP:N	2.53	0.42
5:D:298:MET:HE1	7:F:406:GLN:HG3	2.01	0.42
5:D:490:ILE:HD11	5:D:609:TYR:CE1	2.54	0.42
5:D:536:LEU:HD12	5:D:536:LEU:HA	1.84	0.42
5:D:655:SER:O	5:D:658:GLU:HB3	2.20	0.42
5:D:828:GLY:O	5:D:993:GLU:HB3	2.20	0.42
5:D:929:GLN:OE1	5:D:930:LEU:HG	2.20	0.42
7:F:297:MET:HG3	7:F:326:TRP:CE3	2.55	0.42
3:A:58:GLU:OE2	3:A:170:ARG:NH1	2.53	0.42
4:C:34:SER:O	4:C:34:SER:OG	2.37	0.42
4:C:194:LEU:HD23	4:C:206:ALA:CB	2.50	0.42
4:C:511:LEU:O	4:C:513:GLN:N	2.53	0.42
4:C:985:GLU:CB	4:C:989:LEU:HD13	2.50	0.42
4:C:1115:THR:HG22	4:C:1228:GLY:HA3	2.01	0.42
5:D:126:LEU:HD11	5:D:223:LEU:HD22	2.02	0.42
5:D:137:ARG:O	5:D:137:ARG:HG2	2.20	0.42
5:D:241:VAL:HG23	5:D:241:VAL:O	2.20	0.42
5:D:827:GLU:CG	5:D:832:LYS:HD3	2.50	0.42
5:D:885:VAL:CG2	5:D:894:VAL:HG11	2.50	0.42
5:D:955:LYS:HG2	5:D:1010:GLN:CB	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:1190:ILE:HG22	5:D:1191:PRO:O	2.20	0.42
7:F:490:PRO:HD2	7:F:493:LYS:HB2	2.01	0.42
2:I:101:LEU:CD1	2:I:105:ARG:HD2	2.50	0.41
2:I:113:LEU:HD23	2:I:132:LEU:CB	2.41	0.41
2:J:13:LEU:HD12	2:J:14:PHE:N	2.35	0.41
2:J:67:LEU:HD12	2:J:67:LEU:HA	1.64	0.41
4:C:18:ARG:HD2	4:C:18:ARG:N	2.35	0.41
4:C:150:HIS:NE2	4:C:454:ARG:HG3	2.35	0.41
4:C:321:LEU:O	4:C:325:LEU:HB2	2.20	0.41
4:C:905:ILE:HG22	4:C:906:PHE:CD1	2.55	0.41
4:C:992:LEU:HD21	4:C:1000:LEU:HD12	2.01	0.41
5:D:1039:ASP:HB3	5:D:1074:LEU:CB	2.39	0.41
5:D:1067:ARG:NH2	5:D:1076:PRO:HG3	2.35	0.41
5:D:1140:ARG:HD3	5:D:1140:ARG:HA	1.80	0.41
5:D:1162:ILE:HD12	5:D:1202:GLU:O	2.20	0.41
6:E:3:ARG:HA	6:E:3:ARG:HH11	1.85	0.41
7:F:137:TYR:CZ	7:F:139:GLU:HB2	2.55	0.41
7:F:344:LEU:O	7:F:347:ILE:HB	2.20	0.41
7:F:530:LEU:HB3	7:F:533:ASP:HB2	2.02	0.41
2:I:50:LEU:O	2:I:50:LEU:HD12	2.21	0.41
2:J:97:GLY:O	2:J:101:LEU:HB2	2.20	0.41
3:A:33:ARG:HG3	3:A:34:GLY:N	2.35	0.41
3:A:193:GLU:OE2	3:A:194:GLN:HB3	2.20	0.41
4:C:242:VAL:CG2	4:C:245:ARG:HE	2.30	0.41
4:C:288:PRO:HG2	4:C:291:TYR:HB3	2.03	0.41
4:C:768:MET:O	4:C:784:ALA:HA	2.20	0.41
4:C:1308:ILE:CG2	5:D:379:PRO:HB2	2.49	0.41
5:D:15:GLU:HG3	5:D:16:GLU:H	1.85	0.41
5:D:146:VAL:O	5:D:147:ILE:HD13	2.20	0.41
5:D:1186:TYR:OH	5:D:1188:GLU:OE1	2.21	0.41
6:E:19:LEU:HD12	6:E:19:LEU:O	2.20	0.41
7:F:161:LEU:O	7:F:261:LEU:HA	2.19	0.41
7:F:354:THR:CG2	7:F:357:GLN:H	2.34	0.41
7:F:505:ILE:HD13	7:F:505:ILE:HA	1.89	0.41
2:I:23:HIS:CA	2:I:26:ARG:HG3	2.44	0.41
2:I:62:LEU:O	2:I:68:THR:HA	2.20	0.41
3:A:11:PRO:HA	3:A:30:PRO:HG2	2.01	0.41
4:C:34:SER:OG	4:C:455:SER:HB2	2.19	0.41
4:C:238:GLN:NE2	4:C:286:GLU:OE2	2.53	0.41
4:C:239:MET:HG2	4:C:287:VAL:CG1	2.50	0.41
4:C:1342:GLU:HG3	5:D:18:ASP:OD1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:305:ALA:O	5:D:309:ASN:HB2	2.20	0.41
5:D:954:ASN:HB2	5:D:984:LEU:CD2	2.51	0.41
5:D:1109:LEU:CD2	5:D:1115:ILE:HG21	2.50	0.41
5:D:1238:GLN:OE1	5:D:1238:GLN:HA	2.19	0.41
5:D:1342:ASP:OD1	5:D:1344:LEU:HD23	2.18	0.41
7:F:97:PRO:O	7:F:100:MET:N	2.53	0.41
7:F:371:LYS:O	7:F:371:LYS:HD3	2.20	0.41
7:F:404:LEU:HD22	7:F:439:ILE:CG2	2.49	0.41
7:F:479:THR:HB	7:F:480:PRO:HD2	2.02	0.41
8:G:52:DC:H2"	8:G:53:DA:O5'	2.20	0.41
2:I:14:PHE:HD2	2:I:50:LEU:HD13	1.86	0.41
2:J:134:GLU:OE1	2:J:134:GLU:HA	2.20	0.41
3:A:27:THR:HG23	3:A:201:LEU:O	2.20	0.41
3:B:11:PRO:O	3:B:12:ARG:NE	2.45	0.41
4:C:8:LYS:HE3	4:C:8:LYS:HB3	1.83	0.41
4:C:131:THR:OG1	4:C:135:THR:HG23	2.20	0.41
4:C:594:VAL:HB	4:C:651:ASP:O	2.21	0.41
4:C:1002:LEU:HD23	4:C:1007:LYS:CB	2.50	0.41
4:C:1148:ALA:HB1	4:C:1180:MET:HE2	2.02	0.41
5:D:245:LEU:HG	5:D:246:PRO:HD2	2.03	0.41
5:D:350:SER:HA	5:D:468:VAL:O	2.20	0.41
5:D:908:ILE:HG12	5:D:909:ILE:H	1.85	0.41
5:D:1000:GLY:O	5:D:1020:TRP:HA	2.20	0.41
5:D:1107:VAL:HG12	5:D:1122:ALA:HB2	2.01	0.41
5:D:1155:ILE:C	5:D:1156:LEU:HD22	2.41	0.41
6:E:41:GLU:HG3	6:E:43:ASN:H	1.85	0.41
7:F:94:THR:HG21	7:F:103:ARG:HH21	1.84	0.41
7:F:530:LEU:CD2	7:F:532:LEU:H	2.27	0.41
8:G:42:DT:H6	8:G:42:DT:H2'	1.67	0.41
2:I:85:HIS:C	7:F:557:LYS:HZ2	2.24	0.41
3:A:26:VAL:HG21	3:A:217:ILE:CD1	2.49	0.41
3:A:98:VAL:C	3:A:99:ILE:HD12	2.40	0.41
4:C:163:LYS:HG3	4:C:164:THR:N	2.35	0.41
4:C:268:ARG:NH1	4:C:270:THR:HG22	2.35	0.41
4:C:490:GLN:CG	7:F:472:GLN:HG2	2.50	0.41
4:C:660:VAL:HG21	5:D:769:VAL:HG11	2.03	0.41
4:C:1129:ASN:O	4:C:1133:LYS:HB2	2.21	0.41
4:C:1303:LYS:HD2	4:C:1303:LYS:HA	1.86	0.41
5:D:200:GLN:O	5:D:204:GLU:HG3	2.19	0.41
5:D:801:VAL:HG23	5:D:917:VAL:HG13	2.02	0.41
5:D:1109:LEU:HA	5:D:1109:LEU:HD23	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:1140:ARG:NH1	5:D:1144:LEU:HD22	2.35	0.41
5:D:1159:ILE:HD12	5:D:1160:SER:N	2.35	0.41
7:F:162:ILE:HD12	7:F:216:LEU:HD13	2.02	0.41
7:F:471:LEU:CD1	7:F:477:GLU:HA	2.51	0.41
2:I:11:MET:CE	2:I:37:GLU:H	2.30	0.41
2:I:187:MET:HB3	2:I:191:PHE:CD2	2.56	0.41
2:J:12:THR:HA	2:J:37:GLU:O	2.21	0.41
2:J:129:ARG:HB2	2:J:129:ARG:HH11	1.86	0.41
3:A:48:LEU:HD23	3:A:48:LEU:HA	1.93	0.41
3:A:111:THR:HG23	3:A:113:ALA:N	2.23	0.41
3:B:31:LEU:O	3:B:198:LEU:HD12	2.20	0.41
3:B:59:VAL:HG11	3:B:85:LEU:HD12	2.01	0.41
4:C:13:LYS:HD2	4:C:14:ASP:N	2.36	0.41
4:C:239:MET:CB	4:C:287:VAL:HG11	2.51	0.41
4:C:935:THR:HG23	4:C:939:VAL:CG1	2.51	0.41
5:D:44:ILE:CG1	7:F:450:ILE:HG12	2.51	0.41
5:D:81:ARG:HH11	5:D:81:ARG:CB	2.29	0.41
5:D:291:ILE:HD13	7:F:409:ASN:HB3	2.02	0.41
5:D:797:THR:HB	5:D:924:GLY:HA3	2.02	0.41
5:D:1016:THR:HG21	5:D:1019:ASN:OD1	2.20	0.41
5:D:1027:VAL:O	5:D:1121:LEU:HG	2.20	0.41
5:D:1247:LYS:HB3	5:D:1247:LYS:HE2	1.79	0.41
7:F:152:GLU:H	7:F:152:GLU:HG2	1.56	0.41
7:F:351:THR:HG21	7:F:358:VAL:HG22	2.02	0.41
2:I:162:ALA:O	2:I:166:TRP:N	2.53	0.41
2:J:90:PRO:HG2	2:J:96:ARG:N	2.35	0.41
3:B:17:GLU:OE1	3:B:19:VAL:HG13	2.19	0.41
3:B:71:LYS:HB3	3:B:74:VAL:CG2	2.50	0.41
3:B:198:LEU:HD13	3:B:198:LEU:HA	1.86	0.41
4:C:540:ARG:H	4:C:540:ARG:HG3	1.57	0.41
4:C:883:LEU:HD23	4:C:883:LEU:HA	1.89	0.41
4:C:890:LYS:HE3	4:C:890:LYS:HB3	1.88	0.41
4:C:1170:MET:O	4:C:1174:GLU:HB2	2.21	0.41
5:D:107:LEU:HD13	5:D:111:THR:HG21	2.02	0.41
5:D:255:LEU:HA	5:D:255:LEU:HD13	1.86	0.41
5:D:703:THR:CG2	5:D:715:LYS:HD3	2.48	0.41
5:D:955:LYS:NZ	5:D:1012:ALA:HA	2.35	0.41
5:D:972:LYS:CG	5:D:1003:LEU:H	2.33	0.41
2:I:149:PHE:CD1	2:I:161:LEU:HD11	2.56	0.41
2:J:134:GLU:O	2:J:137:LEU:HD12	2.21	0.41
2:J:139:ILE:HG22	2:J:142:VAL:CG2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:89:ALA:O	3:A:124:VAL:HG12	2.21	0.41
3:A:96:ASP:O	3:A:148:ARG:HG3	2.21	0.41
3:A:159:ILE:HD11	3:A:172:LEU:CD1	2.51	0.41
4:C:274:ILE:O	4:C:277:LEU:HG	2.21	0.41
4:C:1030:GLU:O	4:C:1034:ARG:N	2.54	0.41
4:C:1073:LYS:HE3	4:C:1073:LYS:HB2	1.90	0.41
4:C:1138:VAL:HG21	4:C:1166:ASP:HB3	2.02	0.41
4:C:1223:ARG:O	4:C:1223:ARG:HG3	2.21	0.41
5:D:520:ALA:HB3	5:D:546:ALA:HB2	2.03	0.41
5:D:653:ILE:HD13	5:D:692:ARG:O	2.21	0.41
5:D:986:ASP:CG	5:D:992:LYS:HG2	2.41	0.41
5:D:1273:ASP:OD1	5:D:1275:LEU:HD12	2.21	0.41
7:F:338:HIS:O	7:F:341:LEU:HD12	2.20	0.41
7:F:402:LEU:HA	7:F:402:LEU:HD12	1.81	0.41
1:H:12:DA:H2"	1:H:13:DT:O5'	2.21	0.41
1:H:49:DG:C6	4:C:151:ARG:HD2	2.56	0.41
2:I:47:PRO:HG2	2:I:50:LEU:CB	2.51	0.41
2:I:126:ASP:OD1	2:I:130:LYS:HG3	2.21	0.41
3:A:59:VAL:HG12	3:A:60:GLU:N	2.36	0.41
3:A:191:ARG:HD3	3:A:191:ARG:HA	1.84	0.41
3:B:53:GLY:HA3	3:B:177:TYR:O	2.21	0.41
4:C:75:LEU:CD2	4:C:127:ILE:HD11	2.50	0.41
4:C:202:ARG:HG2	4:C:203:LYS:N	2.36	0.41
4:C:699:LEU:HD23	4:C:799:ASN:HD21	1.86	0.41
4:C:908:GLU:OE1	7:F:611:LEU:HD22	2.20	0.41
4:C:1028:LYS:HE2	4:C:1028:LYS:HB3	1.83	0.41
4:C:1270:PHE:HZ	4:C:1278:LEU:HD12	1.85	0.41
4:C:1280:ALA:HA	5:D:918:ILE:HG22	2.02	0.41
5:D:201:LEU:HD22	5:D:217:LEU:HD11	2.03	0.41
5:D:377:PHE:CD2	5:D:416:ILE:HD11	2.55	0.41
5:D:666:GLU:O	5:D:669:GLN:HB2	2.21	0.41
5:D:909:ILE:HD11	5:D:913:GLU:HB3	2.02	0.41
5:D:1038:THR:OG1	5:D:1077:ALA:O	2.34	0.41
5:D:1064:SER:OG	5:D:1192:LYS:O	2.28	0.41
5:D:1161:GLY:HA2	5:D:1180:VAL:CG2	2.48	0.41
7:F:123:ILE:O	7:F:126:GLY:N	2.53	0.41
7:F:145:LEU:HD22	7:F:228:TYR:CE1	2.55	0.41
7:F:465:ARG:HH12	8:G:26:DT:H2"	1.85	0.41
2:I:191:PHE:HA	2:I:196:PHE:CD2	2.56	0.41
3:A:27:THR:HA	3:A:201:LEU:O	2.21	0.41
4:C:109:ALA:HB1	4:C:110:PRO:CD	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:C:186:PHE:O	4:C:187:GLU:HB3	2.21	0.41
4:C:200:ARG:HD3	4:C:200:ARG:HA	1.88	0.41
4:C:296:VAL:HG21	4:C:314:ASN:HA	2.02	0.41
4:C:965:GLN:HA	4:C:968:GLU:OE1	2.21	0.41
5:D:126:LEU:HD12	5:D:126:LEU:O	2.20	0.41
5:D:317:THR:HG22	5:D:322:ARG:O	2.21	0.41
5:D:860:ARG:HH11	5:D:861:ASN:H	1.69	0.41
5:D:1162:ILE:HD12	5:D:1162:ILE:HA	1.86	0.41
7:F:160:ASP:HB3	7:F:264:LYS:CG	2.37	0.41
7:F:235:ILE:HB	7:F:245:ALA:HB1	2.02	0.41
1:H:42:DG:C2'	1:H:43:DG:OP2	2.68	0.40
2:I:169:PRO:CD	2:I:208:ARG:HH22	2.33	0.40
2:J:116:THR:HA	2:J:120:GLY:CA	2.51	0.40
2:J:148:TYR:HA	2:J:186:TYR:HE1	1.85	0.40
3:B:92:VAL:HG23	3:B:120:ASP:O	2.20	0.40
3:B:104:LYS:HB3	3:B:140:ILE:CG2	2.52	0.40
4:C:97:ARG:HD2	4:C:97:ARG:HA	1.86	0.40
4:C:179:TYR:HB2	4:C:398:SER:HG	1.85	0.40
4:C:230:PHE:HE2	4:C:292:ILE:HG23	1.86	0.40
4:C:241:LEU:O	4:C:283:LYS:HA	2.20	0.40
4:C:270:THR:O	4:C:273:HIS:HB2	2.20	0.40
4:C:850:ILE:HG22	4:C:850:ILE:O	2.21	0.40
4:C:1146:GLN:NE2	4:C:1150:ASP:OD1	2.54	0.40
5:D:120:LEU:HD21	8:G:10:DG:C5'	2.51	0.40
5:D:825:VAL:HG11	5:D:832:LYS:HB2	2.02	0.40
5:D:841:GLY:CA	5:D:901:ARG:HD3	2.51	0.40
5:D:1247:LYS:O	5:D:1248:ILE:HG13	2.22	0.40
5:D:1281:GLU:O	5:D:1285:VAL:HG22	2.21	0.40
7:F:334:SER:HA	7:F:337:VAL:CG2	2.51	0.40
7:F:494:ILE:O	7:F:498:LEU:HG	2.21	0.40
7:F:592:ALA:O	7:F:595:LEU:HG	2.21	0.40
1:H:47:DC:H5"	1:H:47:DC:H6	1.85	0.40
2:I:46:PRO:HB3	2:I:50:LEU:HD23	2.02	0.40
2:J:139:ILE:O	2:J:142:VAL:HG22	2.21	0.40
3:A:140:ILE:HD11	3:A:142:MET:CE	2.52	0.40
3:A:226:GLU:HG2	3:B:10:LYS:HE2	2.03	0.40
3:B:166:ARG:HB3	3:B:170:ARG:CG	2.43	0.40
4:C:91:THR:OG1	4:C:92:TYR:N	2.54	0.40
4:C:339:ASN:OD1	4:C:339:ASN:N	2.54	0.40
4:C:885:GLY:HA2	4:C:917:SER:OG	2.22	0.40
4:C:1118:GLY:O	4:C:1229:TYR:HB2	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:D:94:GLN:H	5:D:94:GLN:HG2	1.68	0.40
5:D:996:LYS:HD3	5:D:996:LYS:HA	1.85	0.40
7:F:216:LEU:HD12	7:F:217:ALA:N	2.36	0.40
7:F:308:GLY:O	7:F:355:ILE:HG22	2.21	0.40
7:F:488:LEU:HD13	7:F:488:LEU:HA	1.90	0.40
7:F:600:HIS:CB	7:F:603:ARG:HH21	2.34	0.40
4:C:582:ASN:HB2	4:C:586:PHE:O	2.21	0.40
4:C:979:LEU:HA	4:C:1002:LEU:CD2	2.51	0.40
5:D:199:GLU:HA	5:D:202:ARG:HG2	2.03	0.40
5:D:889:ASP:O	5:D:1284:ARG:NH2	2.55	0.40
7:F:404:LEU:HD23	7:F:404:LEU:HA	1.83	0.40
7:F:470:MET:SD	7:F:486:ARG:HG3	2.61	0.40
1:H:30:DT:H2"	1:H:31:DT:O5'	2.21	0.40
2:I:41:VAL:CB	2:I:47:PRO:HD3	2.52	0.40
2:I:137:LEU:HD23	2:I:137:LEU:HA	1.98	0.40
2:J:75:ILE:O	2:J:78:TYR:HB3	2.21	0.40
2:J:166:TRP:CZ2	2:J:200:LEU:HD22	2.56	0.40
3:A:11:PRO:CA	3:A:30:PRO:HD2	2.49	0.40
3:B:190:ALA:O	3:B:198:LEU:HB2	2.21	0.40
4:C:9:LYS:HG3	4:C:1171:ARG:NH1	2.36	0.40
4:C:70:TYR:CZ	4:C:72:SER:HA	2.57	0.40
4:C:275:ARG:O	4:C:279:LYS:HG2	2.21	0.40
5:D:411:ILE:HD13	5:D:411:ILE:HA	1.83	0.40
5:D:850:LYS:CD	5:D:875:ASN:HD21	2.33	0.40
5:D:884:SER:OG	5:D:886:VAL:HG12	2.22	0.40
5:D:1024:THR:HG22	5:D:1026:PRO:HD3	2.04	0.40
5:D:1069:ALA:O	5:D:1072:LYS:HG3	2.21	0.40
5:D:1164:SER:HA	5:D:1200:GLU:OE2	2.20	0.40
7:F:248:GLU:HA	7:F:251:LYS:HE3	2.02	0.40
7:F:253:SER:O	7:F:256:PHE:HB3	2.21	0.40
7:F:394:TYR:HE1	8:G:26:DT:H3	1.68	0.40
7:F:607:LEU:HA	7:F:607:LEU:HD23	1.77	0.40
2:J:146:LYS:HB3	2:J:151:SER:O	2.21	0.40
3:A:98:VAL:HG12	3:A:99:ILE:H	1.85	0.40
4:C:75:LEU:HD21	4:C:127:ILE:HD11	2.02	0.40
4:C:129:LEU:HD23	4:C:129:LEU:HA	1.90	0.40
4:C:284:LEU:HD12	4:C:285:ILE:N	2.37	0.40
4:C:804:PHE:O	5:D:638:SER:HB2	2.21	0.40
4:C:1257:GLN:HA	4:C:1258:PRO:HD3	1.94	0.40
5:D:615:LYS:HB2	5:D:615:LYS:HE2	1.92	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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
2	I	204/212 (96%)	184 (90%)	19 (9%)	1 (0%)	29 66
2	J	199/212 (94%)	179 (90%)	19 (10%)	1 (0%)	29 66
3	A	228/329 (69%)	202 (89%)	26 (11%)	0	100 100
3	B	222/329 (68%)	191 (86%)	31 (14%)	0	100 100
3	K	63/329 (19%)	58 (92%)	5 (8%)	0	100 100
4	C	1338/1342 (100%)	1152 (86%)	183 (14%)	3 (0%)	47 78
5	D	1333/1407 (95%)	1159 (87%)	174 (13%)	0	100 100
6	E	77/91 (85%)	70 (91%)	6 (8%)	1 (1%)	12 47
7	F	466/613 (76%)	422 (91%)	44 (9%)	0	100 100
All	All	4130/4864 (85%)	3617 (88%)	507 (12%)	6 (0%)	54 83

All (6) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
4	C	200	ARG
2	J	72	SER
4	C	198	ILE
4	C	1164	PHE
2	I	72	SER
6	E	33	GLY

5.3.2 Protein sidechains

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	I	182/187 (97%)	166 (91%)	16 (9%)	10 38
2	J	179/187 (96%)	166 (93%)	13 (7%)	14 44
3	A	198/286 (69%)	177 (89%)	21 (11%)	6 30
3	B	194/286 (68%)	172 (89%)	22 (11%)	6 28
3	K	58/286 (20%)	51 (88%)	7 (12%)	5 24
4	C	1155/1157 (100%)	1030 (89%)	125 (11%)	6 29
5	D	1104/1168 (94%)	987 (89%)	117 (11%)	6 30
6	E	67/75 (89%)	61 (91%)	6 (9%)	9 37
7	F	420/540 (78%)	369 (88%)	51 (12%)	5 24
All	All	3557/4172 (85%)	3179 (89%)	378 (11%)	10 30

All (378) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	I	27	ILE
2	I	28	VAL
2	I	29	LEU
2	I	32	LYS
2	I	42	GLU
2	I	49	ASP
2	I	53	LEU
2	I	68	THR
2	I	98	GLU
2	I	111	TYR
2	I	189	ARG
2	I	192	GLU
2	I	194	ASP
2	I	196	PHE
2	I	200	LEU
2	I	207	MET
2	J	12	THR
2	J	38	ILE
2	J	81	GLU
2	J	82	ARG
2	J	92	TYR
2	J	116	THR
2	J	132	LEU
2	J	137	LEU
2	J	142	VAL
2	J	156	LEU

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Mol	Chain	Res	Type
2	J	158	ASP
2	J	171	LEU
2	J	183	LEU
3	K	254	LEU
3	K	258	ASP
3	K	277	TYR
3	K	280	ASP
3	K	281	LEU
3	K	289	LEU
3	K	303	ILE
3	A	8	PHE
3	A	12	ARG
3	A	13	LEU
3	A	22	THR
3	A	26	VAL
3	A	33	ARG
3	A	54	CYS
3	A	61	ILE
3	A	70	THR
3	A	74	VAL
3	A	77	ASP
3	A	96	ASP
3	A	129	VAL
3	A	158	ARG
3	A	177	TYR
3	A	178	SER
3	A	181	GLU
3	A	192	VAL
3	A	211	ILE
3	A	212	ASP
3	A	236	ASP
3	B	7	GLU
3	B	9	LEU
3	B	27	THR
3	B	29	GLU
3	B	32	GLU
3	B	33	ARG
3	B	38	THR
3	B	68	TYR
3	B	77	ASP
3	B	78	ILE
3	B	91	ARG

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Mol	Chain	Res	Type
3	B	92	VAL
3	B	98	VAL
3	B	111	THR
3	B	120	ASP
3	B	133	LEU
3	B	146	VAL
3	B	162	GLU
3	B	183	ILE
3	B	203	ILE
3	B	214	GLU
3	B	222	THR
4	C	6	THR
4	C	8	LYS
4	C	9	LYS
4	C	18	ARG
4	C	21	VAL
4	C	30	ILE
4	C	32	LEU
4	C	40	GLU
4	C	62	TYR
4	C	74	ARG
4	C	79	VAL
4	C	83	GLN
4	C	91	THR
4	C	97	ARG
4	C	111	GLU
4	C	113	THR
4	C	122	VAL
4	C	135	THR
4	C	141	THR
4	C	161	LYS
4	C	163	LYS
4	C	177	ILE
4	C	194	LEU
4	C	197	ARG
4	C	199	ASP
4	C	214	ASN
4	C	216	THR
4	C	231	GLU
4	C	234	ASP
4	C	264	GLU
4	C	272	ARG

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Mol	Chain	Res	Type
4	C	279	LYS
4	C	280	ASP
4	C	281	ASP
4	C	285	ILE
4	C	286	GLU
4	C	290	GLU
4	C	299	LYS
4	C	320	ASP
4	C	331	LYS
4	C	335	THR
4	C	337	PHE
4	C	338	THR
4	C	347	ILE
4	C	364	VAL
4	C	377	THR
4	C	384	LEU
4	C	392	GLU
4	C	393	ASP
4	C	419	ILE
4	C	423	ASP
4	C	424	ASP
4	C	448	LEU
4	C	465	ARG
4	C	468	LEU
4	C	471	VAL
4	C	472	GLU
4	C	492	MET
4	C	514	PHE
4	C	522	SER
4	C	524	ILE
4	C	540	ARG
4	C	546	GLU
4	C	595	THR
4	C	622	ASN
4	C	626	GLU
4	C	632	ASP
4	C	659	GLN
4	C	672	GLU
4	C	681	MET
4	C	687	ARG
4	C	694	ARG
4	C	699	LEU

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Mol	Chain	Res	Type
4	C	702	THR
4	C	748	ILE
4	C	749	ASP
4	C	750	ILE
4	C	754	THR
4	C	759	SER
4	C	765	ILE
4	C	781	ASP
4	C	790	ASP
4	C	841	ARG
4	C	843	THR
4	C	844	LYS
4	C	865	LEU
4	C	881	ASP
4	C	890	LYS
4	C	895	LEU
4	C	908	GLU
4	C	915	ASP
4	C	919	ARG
4	C	924	VAL
4	C	946	LEU
4	C	949	GLU
4	C	959	ASP
4	C	963	GLU
4	C	978	VAL
4	C	995	ASP
4	C	999	GLU
4	C	1008	GLN
4	C	1017	GLN
4	C	1018	TYR
4	C	1019	ASP
4	C	1025	PHE
4	C	1026	GLU
4	C	1033	ARG
4	C	1041	ASP
4	C	1058	ARG
4	C	1096	ILE
4	C	1134	GLN
4	C	1156	ARG
4	C	1158	LYS
4	C	1174	GLU
4	C	1198	LEU

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Mol	Chain	Res	Type
4	C	1217	THR
4	C	1222	GLU
4	C	1227	VAL
4	C	1246	ARG
4	C	1254	VAL
4	C	1274	GLU
4	C	1289	GLU
4	C	1302	THR
4	C	1316	GLU
4	C	1337	ILE
5	D	17	PHE
5	D	24	LEU
5	D	39	LYS
5	D	46	TYR
5	D	48	THR
5	D	56	LEU
5	D	70	CYS
5	D	77	ARG
5	D	81	ARG
5	D	109	SER
5	D	111	THR
5	D	114	ILE
5	D	134	ASP
5	D	172	PHE
5	D	174	ASP
5	D	193	ASP
5	D	209	ASN
5	D	210	SER
5	D	216	LYS
5	D	218	THR
5	D	227	PHE
5	D	232	ASN
5	D	237	MET
5	D	244	VAL
5	D	248	ASP
5	D	255	LEU
5	D	289	ASP
5	D	300	GLN
5	D	306	LEU
5	D	316	ILE
5	D	332	LYS
5	D	350	SER

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Mol	Chain	Res	Type
5	D	353	SER
5	D	368	LEU
5	D	387	LEU
5	D	401	VAL
5	D	413	ASP
5	D	424	ASN
5	D	431	ARG
5	D	434	ILE
5	D	473	THR
5	D	489	ASN
5	D	506	VAL
5	D	526	VAL
5	D	527	LEU
5	D	528	THR
5	D	535	ARG
5	D	537	TYR
5	D	545	HIS
5	D	548	VAL
5	D	558	ASP
5	D	563	LEU
5	D	573	THR
5	D	594	GLN
5	D	603	LYS
5	D	614	LEU
5	D	617	THR
5	D	618	VAL
5	D	634	ARG
5	D	661	VAL
5	D	666	GLU
5	D	674	THR
5	D	678	ARG
5	D	680	ASN
5	D	685	ILE
5	D	705	THR
5	D	707	ILE
5	D	709	ARG
5	D	710	ASP
5	D	713	GLU
5	D	724	MET
5	D	746	LEU
5	D	751	ASP
5	D	759	ILE

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Mol	Chain	Res	Type
5	D	760	THR
5	D	765	GLU
5	D	769	VAL
5	D	797	THR
5	D	806	ASP
5	D	847	ASP
5	D	849	LEU
5	D	857	LEU
5	D	876	SER
5	D	891	ASP
5	D	905	ARG
5	D	907	HIS
5	D	918	ILE
5	D	925	GLU
5	D	929	GLN
5	D	986	ASP
5	D	996	LYS
5	D	999	TYR
5	D	1020	TRP
5	D	1023	HIS
5	D	1034	PHE
5	D	1038	THR
5	D	1045	THR
5	D	1056	LEU
5	D	1081	VAL
5	D	1082	ASP
5	D	1140	ARG
5	D	1167	LYS
5	D	1180	VAL
5	D	1187	GLU
5	D	1202	GLU
5	D	1231	ARG
5	D	1234	VAL
5	D	1235	ASN
5	D	1250	ASP
5	D	1275	LEU
5	D	1307	LEU
5	D	1325	PHE
5	D	1333	THR
5	D	1342	ASP
5	D	1351	VAL
5	D	1365	TYR

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Mol	Chain	Res	Type
5	D	1366	HIS
6	E	36	ASP
6	E	39	VAL
6	E	41	GLU
6	E	46	THR
6	E	56	GLU
6	E	68	GLU
7	F	90	GLU
7	F	127	ILE
7	F	131	GLN
7	F	152	GLU
7	F	158	LEU
7	F	160	ASP
7	F	216	LEU
7	F	225	ARG
7	F	232	ARG
7	F	250	LEU
7	F	252	LEU
7	F	255	VAL
7	F	265	GLN
7	F	266	PHE
7	F	270	VAL
7	F	278	ASP
7	F	290	LEU
7	F	296	LYS
7	F	301	ASN
7	F	316	PHE
7	F	332	ASP
7	F	339	ARG
7	F	341	LEU
7	F	342	GLN
7	F	359	LYS
7	F	362	ASN
7	F	384	LEU
7	F	390	ILE
7	F	405	ILE
7	F	412	LEU
7	F	429	THR
7	F	433	TRP
7	F	442	SER
7	F	446	GLN
7	F	452	ILE

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Mol	Chain	Res	Type
7	F	472	GLN
7	F	489	MET
7	F	525	ASP
7	F	533	ASP
7	F	540	LEU
7	F	551	LEU
7	F	554	ARG
7	F	558	VAL
7	F	573	LEU
7	F	579	GLN
7	F	588	ARG
7	F	589	GLN
7	F	591	GLU
7	F	603	ARG
7	F	604	SER
7	F	612	ASP

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (51) such sidechains are listed below:

Mol	Chain	Res	Type
2	I	24	GLN
2	I	57	GLN
2	I	115	ASN
2	J	57	GLN
2	J	115	ASN
2	J	119	ASN
3	K	283	GLN
3	A	147	GLN
3	A	194	GLN
3	A	208	ASN
3	B	93	GLN
3	B	128	HIS
4	C	120	GLN
4	C	219	GLN
4	C	314	ASN
4	C	327	GLN
4	C	463	GLN
4	C	490	GLN
4	C	658	GLN
4	C	673	HIS
4	C	808	ASN
4	C	834	GLN

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Mol	Chain	Res	Type
4	C	1008	GLN
4	C	1017	GLN
4	C	1023	HIS
4	C	1111	GLN
4	C	1220	GLN
4	C	1264	GLN
4	C	1268	GLN
4	C	1336	ASN
5	D	45	ASN
5	D	186	GLN
5	D	229	GLN
5	D	294	ASN
5	D	419	HIS
5	D	477	GLN
5	D	495	ASN
5	D	560	ASN
5	D	594	GLN
5	D	669	GLN
5	D	805	GLN
5	D	867	GLN
5	D	968	ASN
5	D	1010	GLN
7	F	128	ASN
7	F	131	GLN
7	F	258	GLN
7	F	283	GLN
7	F	362	ASN
7	F	455	HIS
7	F	464	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

5.4 Non-standard residues in protein, DNA, RNA chains

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 3 ligands modelled in this entry, 3 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

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.

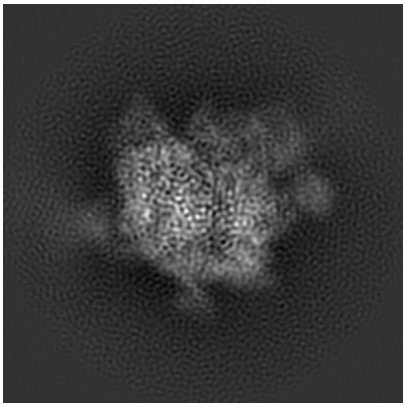
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-30307. These allow visual inspection of the internal detail of the map and identification of artifacts.

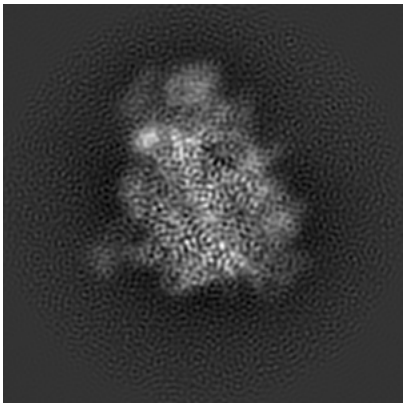
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

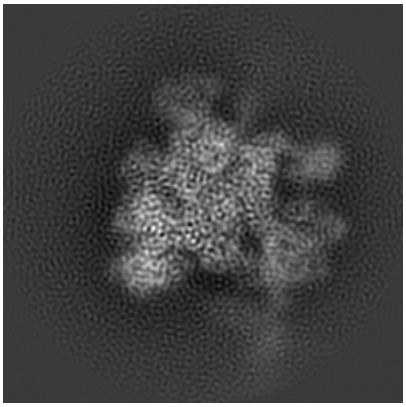
6.1.1 Primary map



X



Y

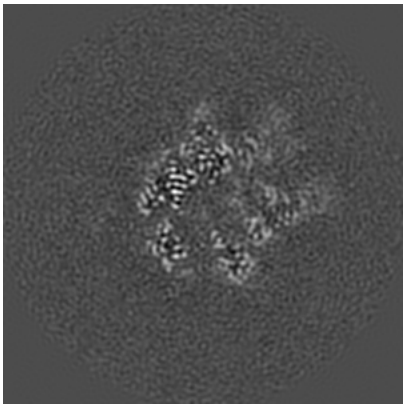


Z

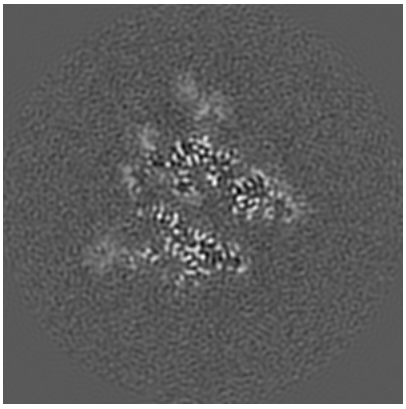
The images above show the map projected in three orthogonal directions.

6.2 Central slices

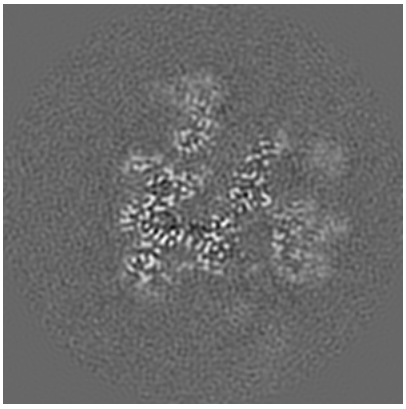
6.2.1 Primary map



X Index: 100



Y Index: 100

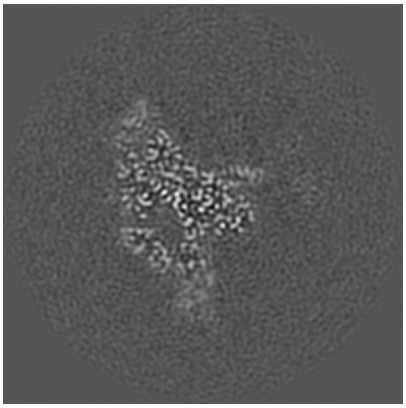


Z Index: 100

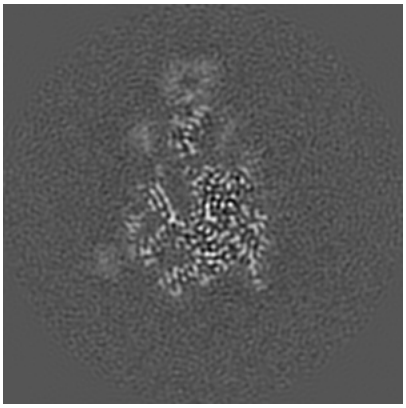
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

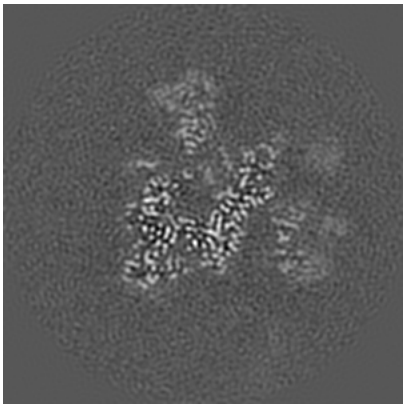
6.3.1 Primary map



X Index: 74



Y Index: 87

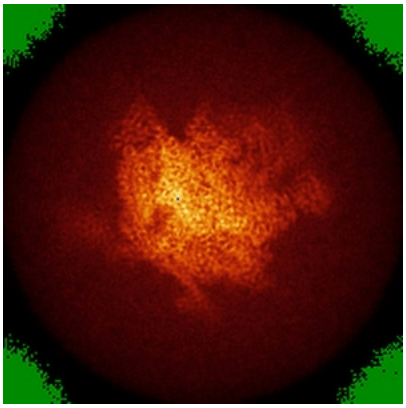


Z Index: 103

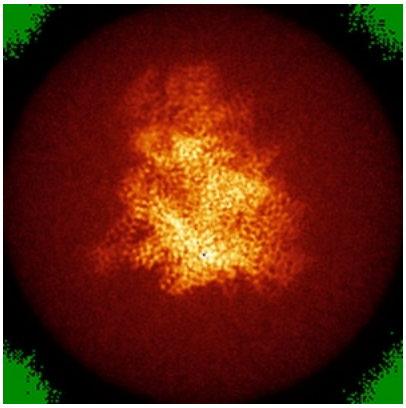
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

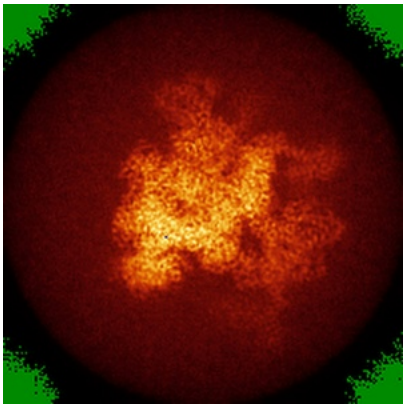
6.4.1 Primary map



X



Y

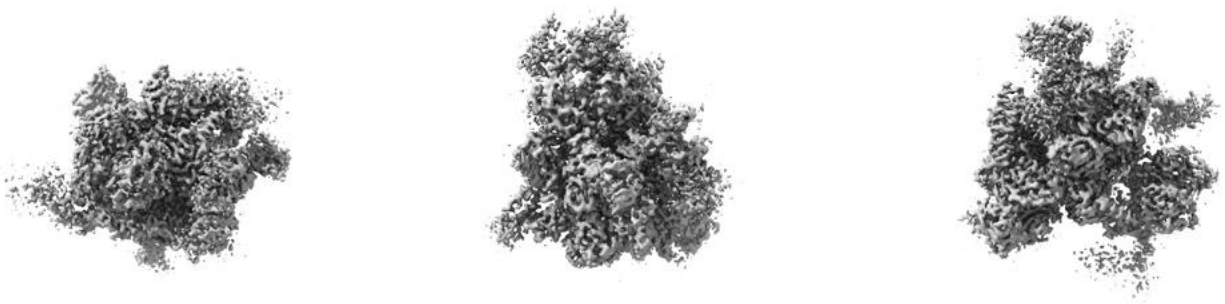


Z

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



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 0.026. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

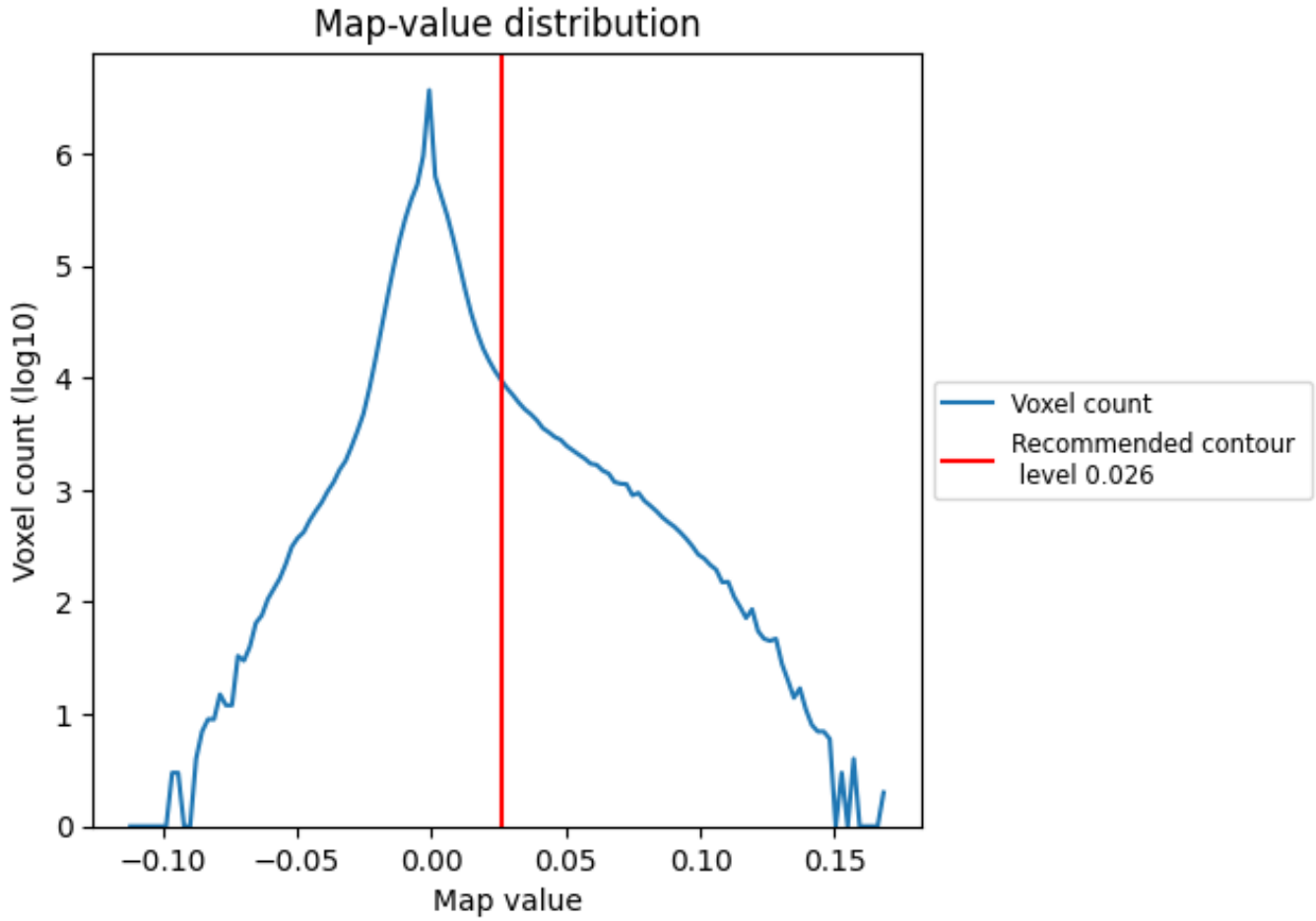
6.6 Mask visualisation (i)

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

7 Map analysis

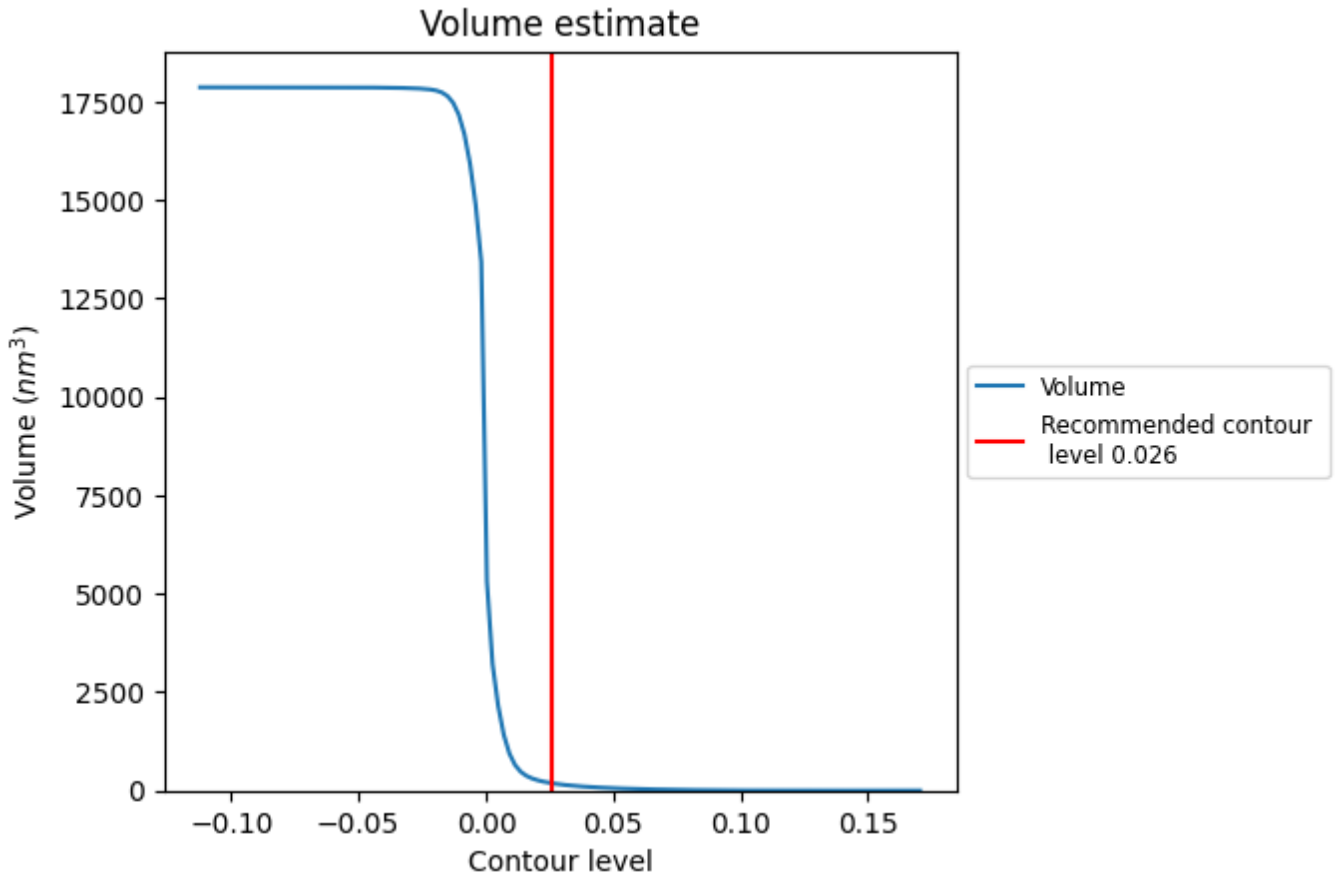
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



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.

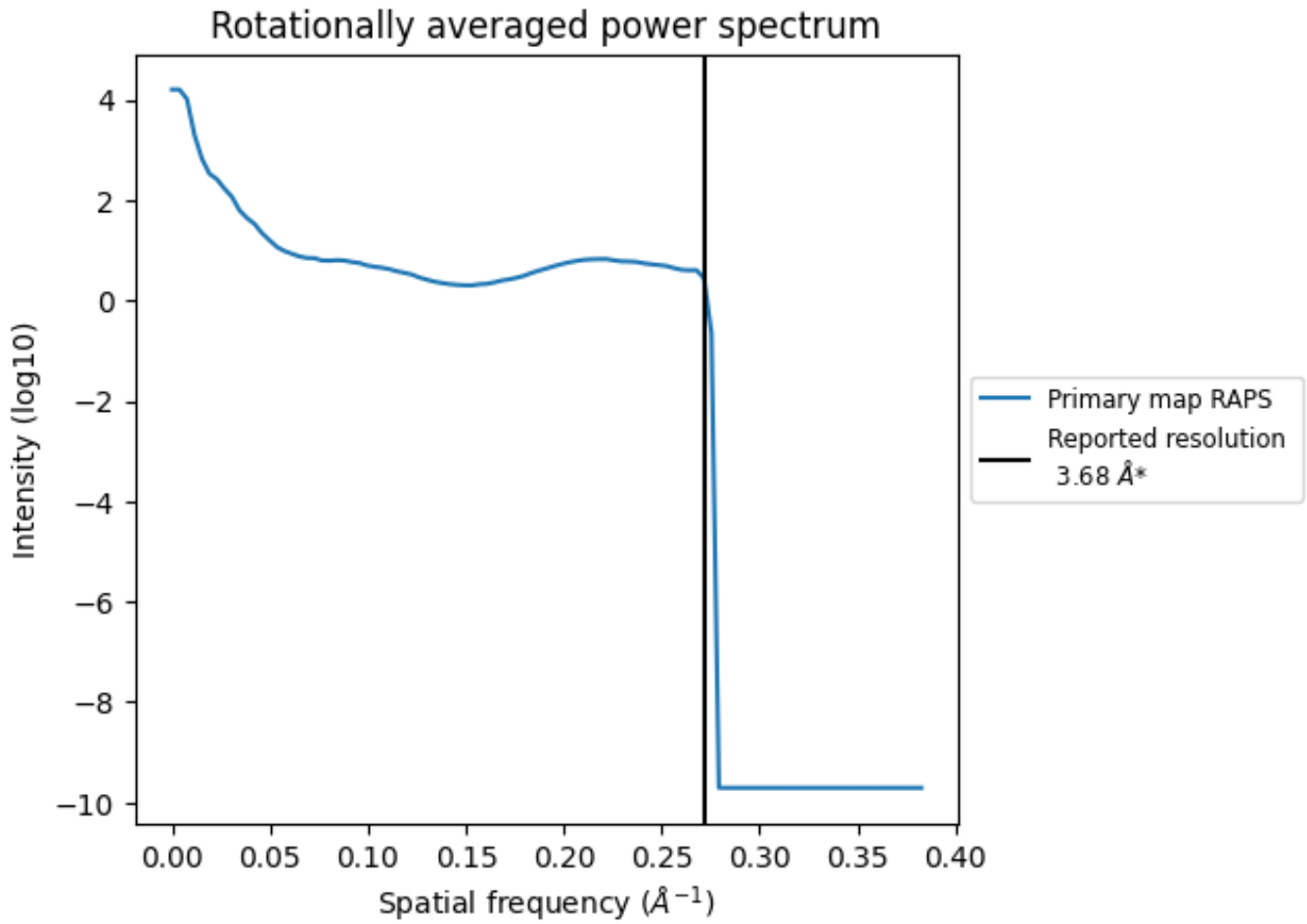
7.2 Volume estimate (i)



The volume at the recommended contour level is 186 nm^3; this corresponds to an approximate mass of 168 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 0.272 Å^{-1}

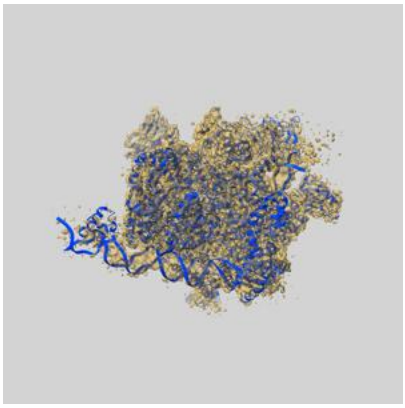
8 Fourier-Shell correlation

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

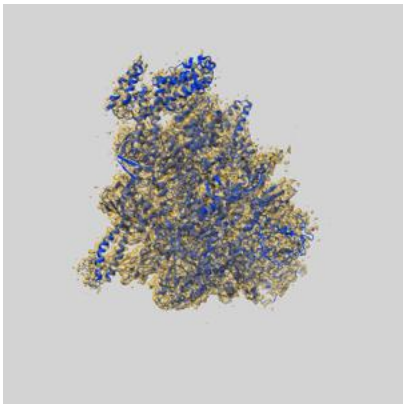
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-30307 and PDB model 7C97. Per-residue inclusion information can be found in section 3 on page 6.

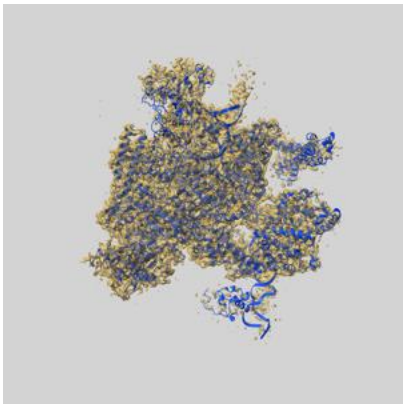
9.1 Map-model overlay



X



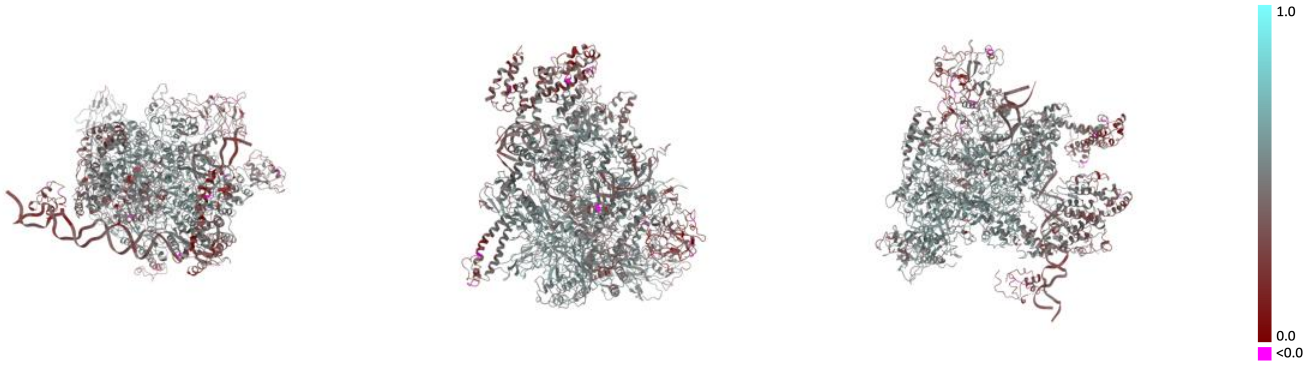
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.026 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.

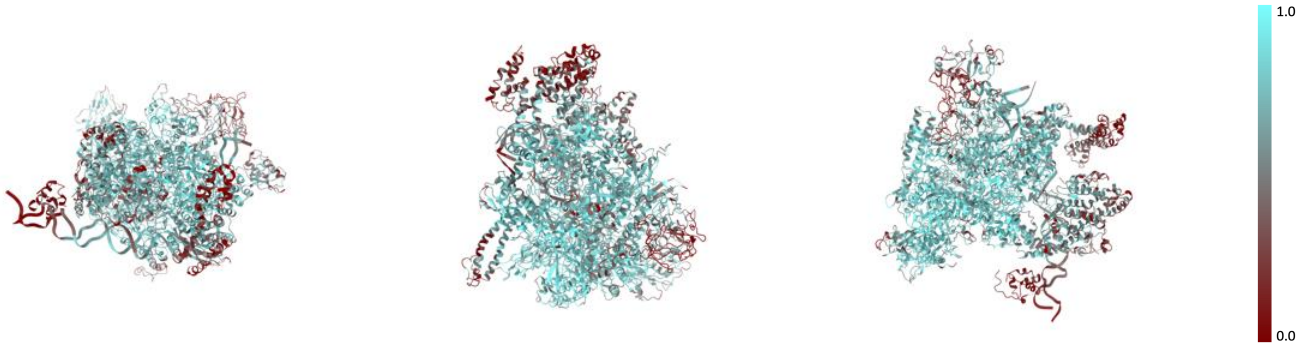
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according 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.

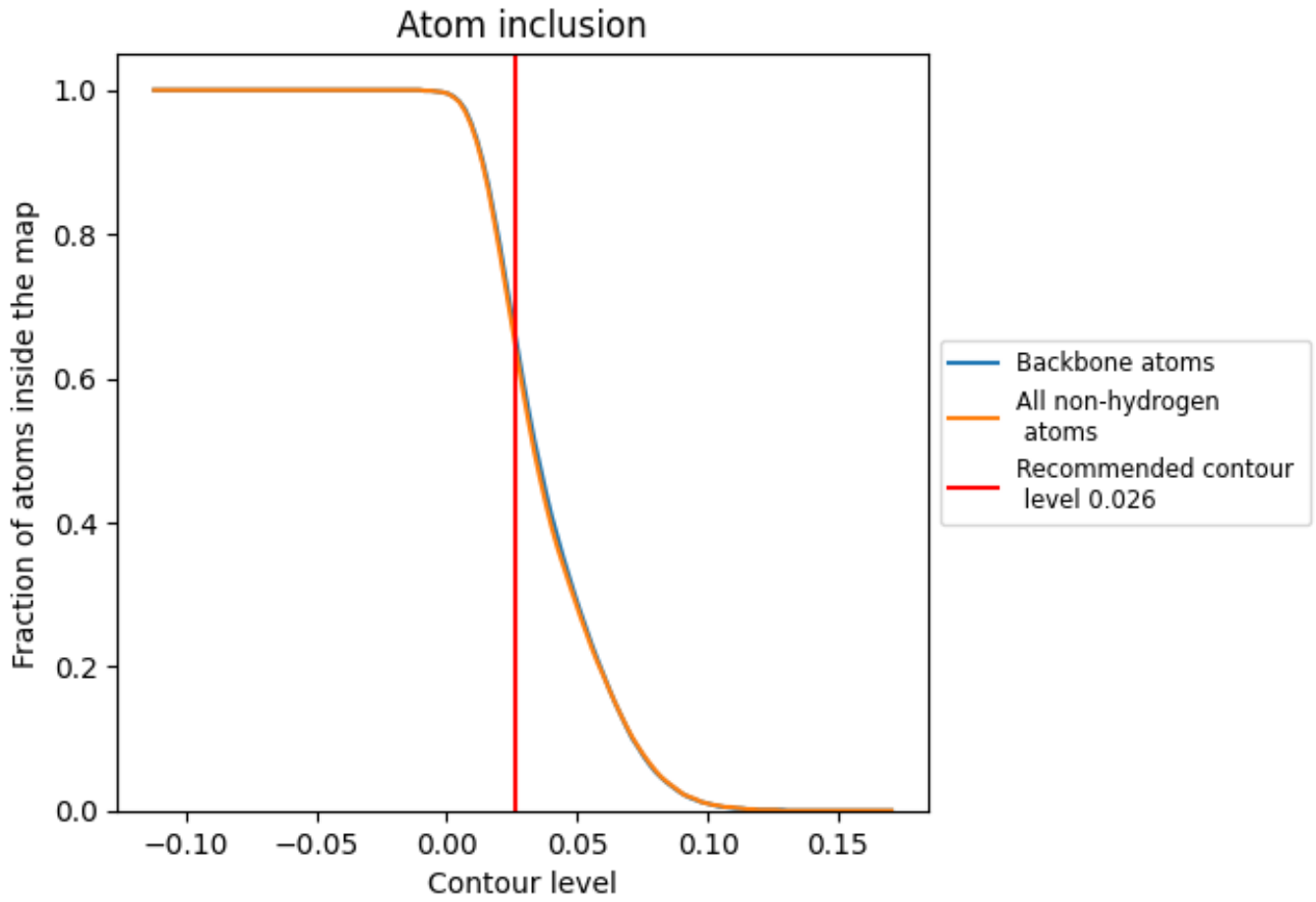
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

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 (0.026).

9.4 Atom inclusion (i)



At the recommended contour level, 66% of all backbone atoms, 65% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.026) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6510	0.4610
A	0.7700	0.5210
B	0.6850	0.4780
C	0.7430	0.4990
D	0.6900	0.4800
E	0.7330	0.5020
F	0.5090	0.4020
G	0.5280	0.3400
H	0.4940	0.3570
I	0.5170	0.4190
J	0.5270	0.4150
K	0.0630	0.2430