Full wwPDB X-ray Structure Validation Report ⓘ

May 29, 2020 – 08:46 am BST

PDB ID	:	5UAQ
Title	:	Escherichia coli RNA polymerase RpoB H526Y mutant
Authors	:	Molodtsov, V.; Scharf, N.T.; Stefan, M.A.; Garcia, G.A.; Murakami, K.S.
Deposited on	:	2016-12-19
Resolution	:	3.60 Å(reported)

This is a Full wwPDB X-ray Structure 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/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The following versions of software and data (see references ①) were used in the production of this report:

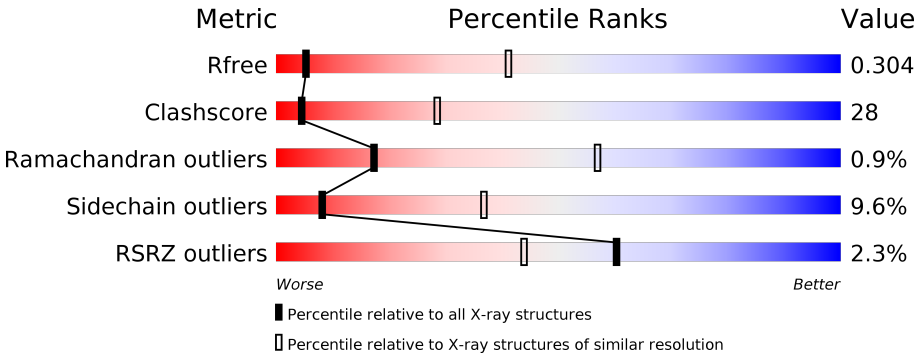
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.13
EDS	:	2.11
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.11

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.60 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)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1257 (3.70-3.50)
Clashscore	141614	1353 (3.70-3.50)
Ramachandran outliers	138981	1307 (3.70-3.50)
Sidechain outliers	138945	1307 (3.70-3.50)
RSRZ outliers	127900	1161 (3.70-3.50)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower 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 electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	329	42% 42% 9% 6%
1	B	329	29% 33% 34%
1	G	329	29% 31% 6% 32%
1	H	329	4% 27% 35% 34%
2	C	1342	44% 47% 9%
2	I	1342	4% 50% 44% 6%

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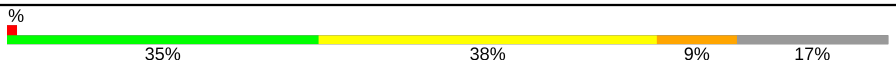
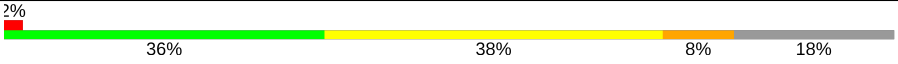
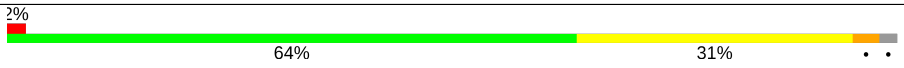
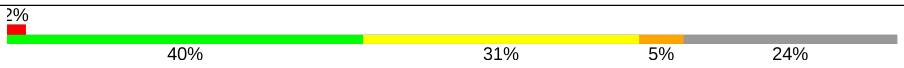
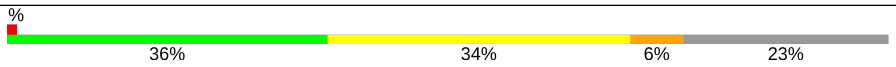
Mol	Chain	Length	Quality of chain
3	D	1407	
3	J	1407	
4	E	91	
4	K	91	
5	F	613	
5	L	613	

2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 55699 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called DNA-directed RNA polymerase subunit alpha.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	309	Total	C	N	O	S	0	0	0
			2403	1505	421	469	8			
1	B	217	Total	C	N	O	S	0	0	0
			1672	1044	295	327	6			
1	G	224	Total	C	N	O	S	0	0	0
			1730	1076	308	340	6			
1	H	217	Total	C	N	O	S	0	0	0
			1667	1041	293	327	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	C	1340	Total	C	N	O	S	0	0	0
			10572	6634	1839	2056	43			
2	I	1340	Total	C	N	O	S	0	0	0
			10568	6632	1838	2055	43			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
C	526	TYR	HIS	engineered mutation	UNP P0A8V2
I	526	TYR	HIS	engineered mutation	UNP P0A8V2

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	D	1166	Total	C	N	O	S	0	0	0
			9107	5723	1634	1704	46			
3	J	1155	Total	C	N	O	S	0	0	0
			9029	5676	1620	1687	46			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	E	89	Total	C	N	O	S	0	0	0
			691	421	129	140	1			
4	K	79	Total	C	N	O	S	0	0	0
			627	382	118	126	1			

- Molecule 5 is a protein called RNA polymerase sigma factor RpoD.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	F	467	Total	C	N	O	S	0	0	0
			3806	2385	677	721	23			
5	L	469	Total	C	N	O	S	0	0	0
			3821	2393	679	726	23			

- Molecule 6 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
6	J	1	Total	Mg	0	0
			1	1		
6	D	1	Total	Mg	0	0
			1	1		

- Molecule 7 is ZINC ION (three-letter code: ZN) (formula: Zn).

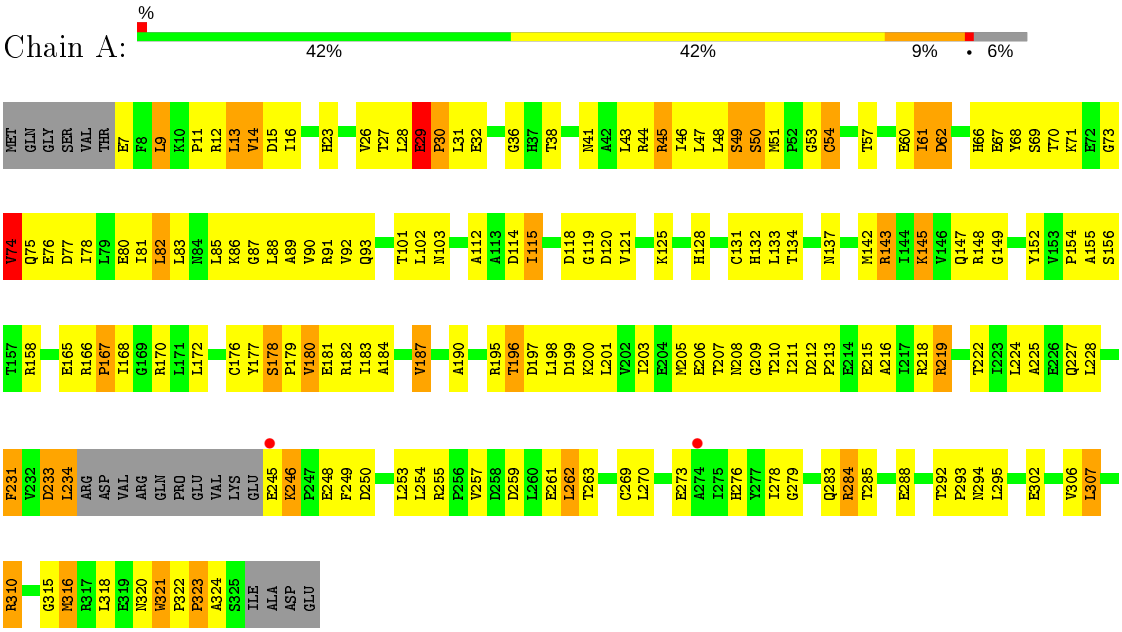
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
7	J	2	Total	Zn	0	0
			2	2		
7	D	2	Total	Zn	0	0
			2	2		

3 Residue-property plots (i)

These plots are drawn for all protein, RNA and DNA 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 electron 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 dot above a residue indicates a poor fit to the electron density (RSRZ > 2). 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.

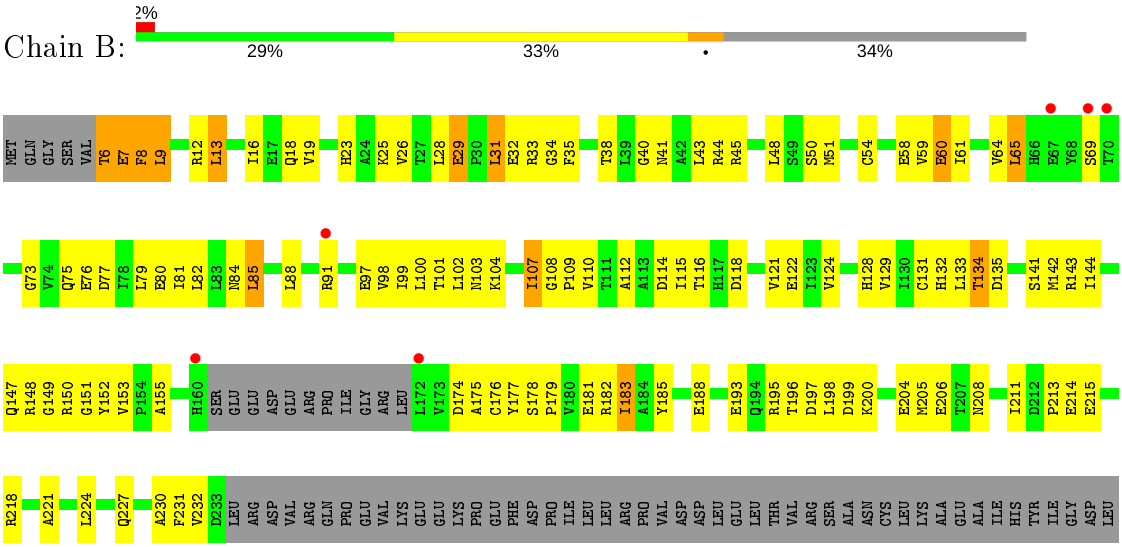
- Molecule 1: DNA-directed RNA polymerase subunit alpha

Chain A:



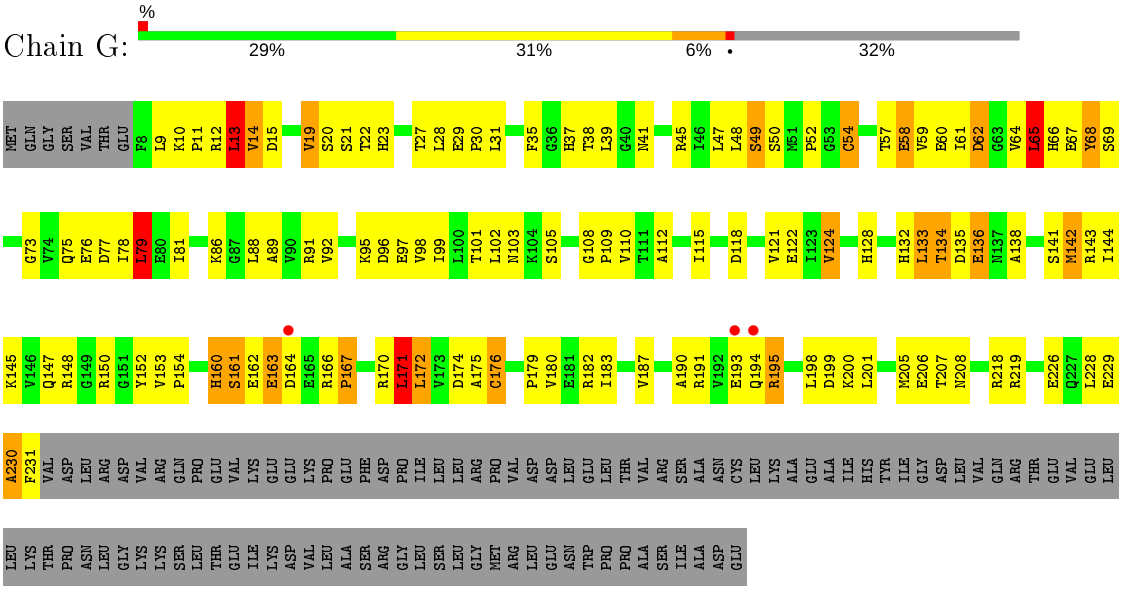
- Molecule 1: DNA-directed RNA polymerase subunit alpha

Chain B:



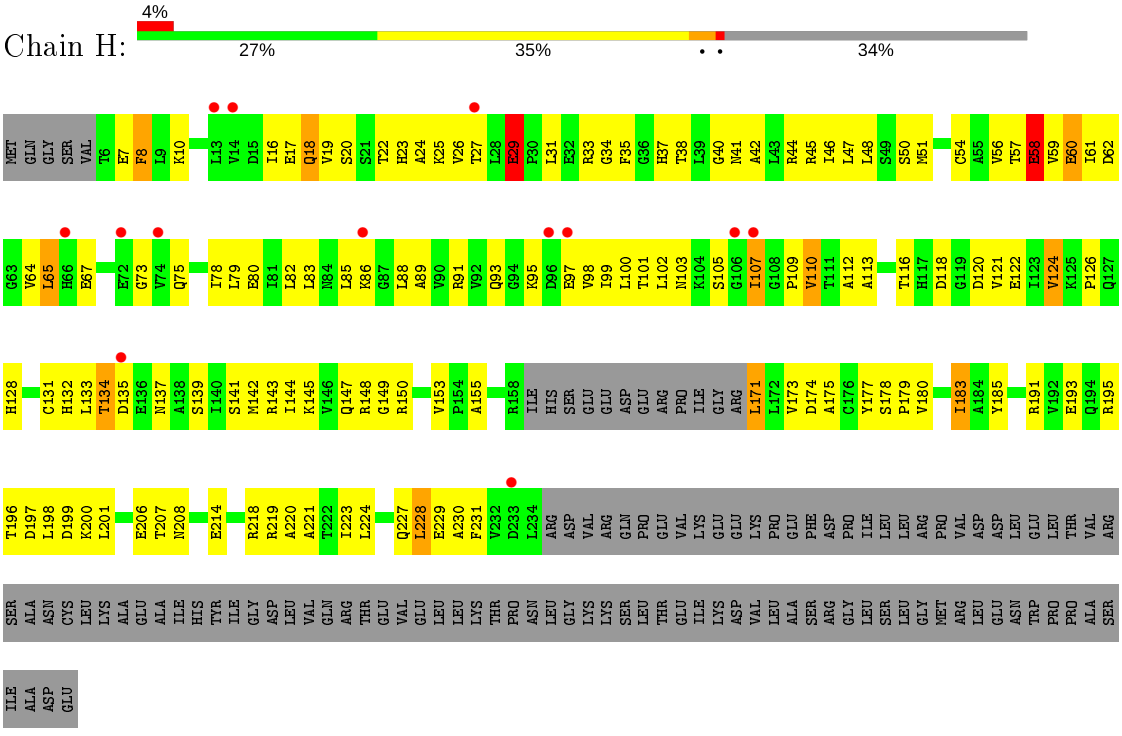
• Molecule 1: DNA-directed RNA polymerase subunit alpha

Chain G:



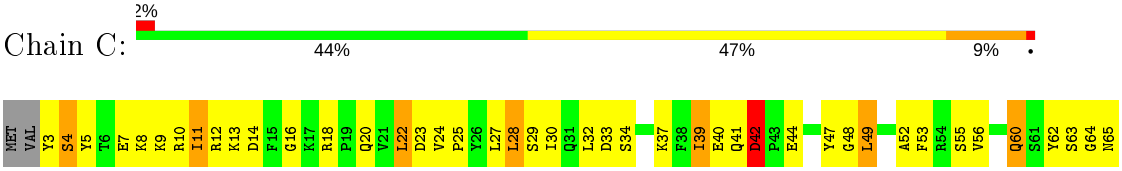
• Molecule 1: DNA-directed RNA polymerase subunit alpha

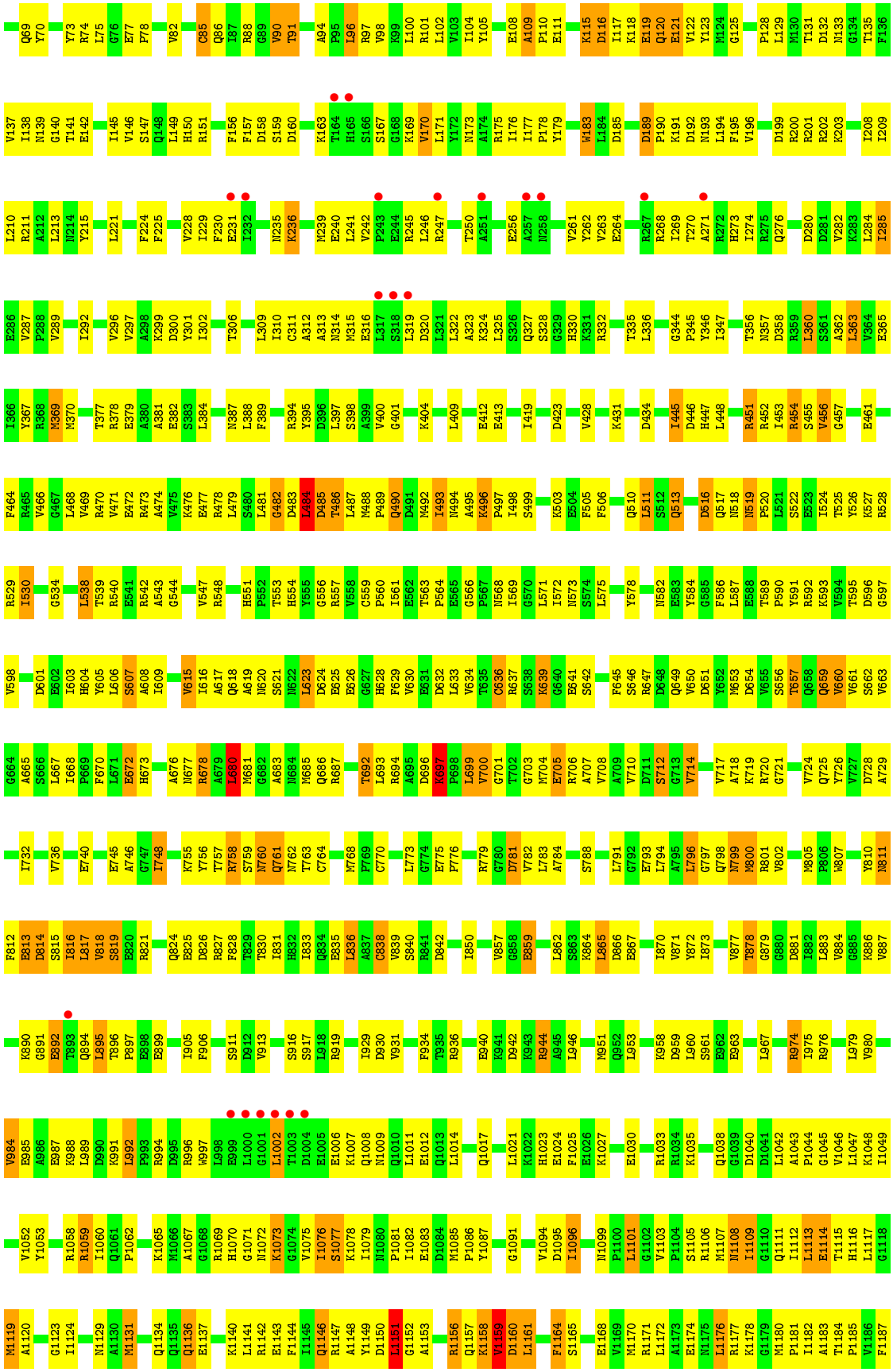
Chain H:



• Molecule 2: DNA-directed RNA polymerase subunit beta

Chain C:

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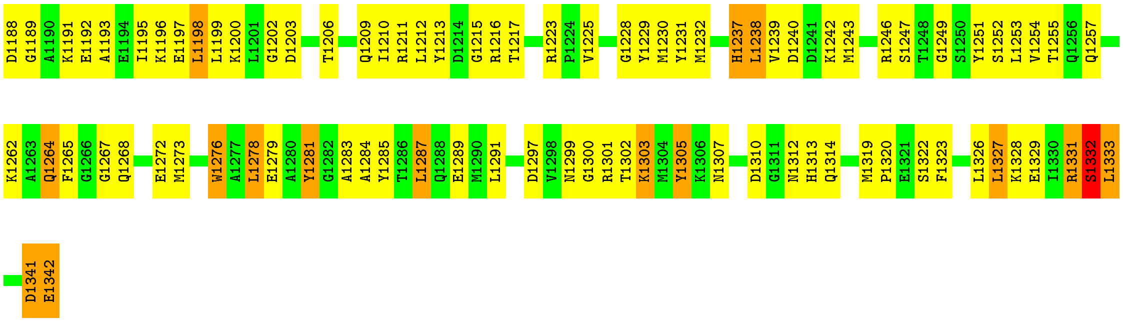
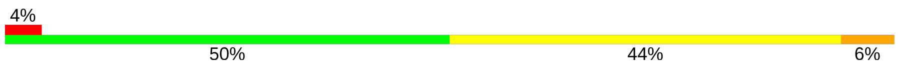
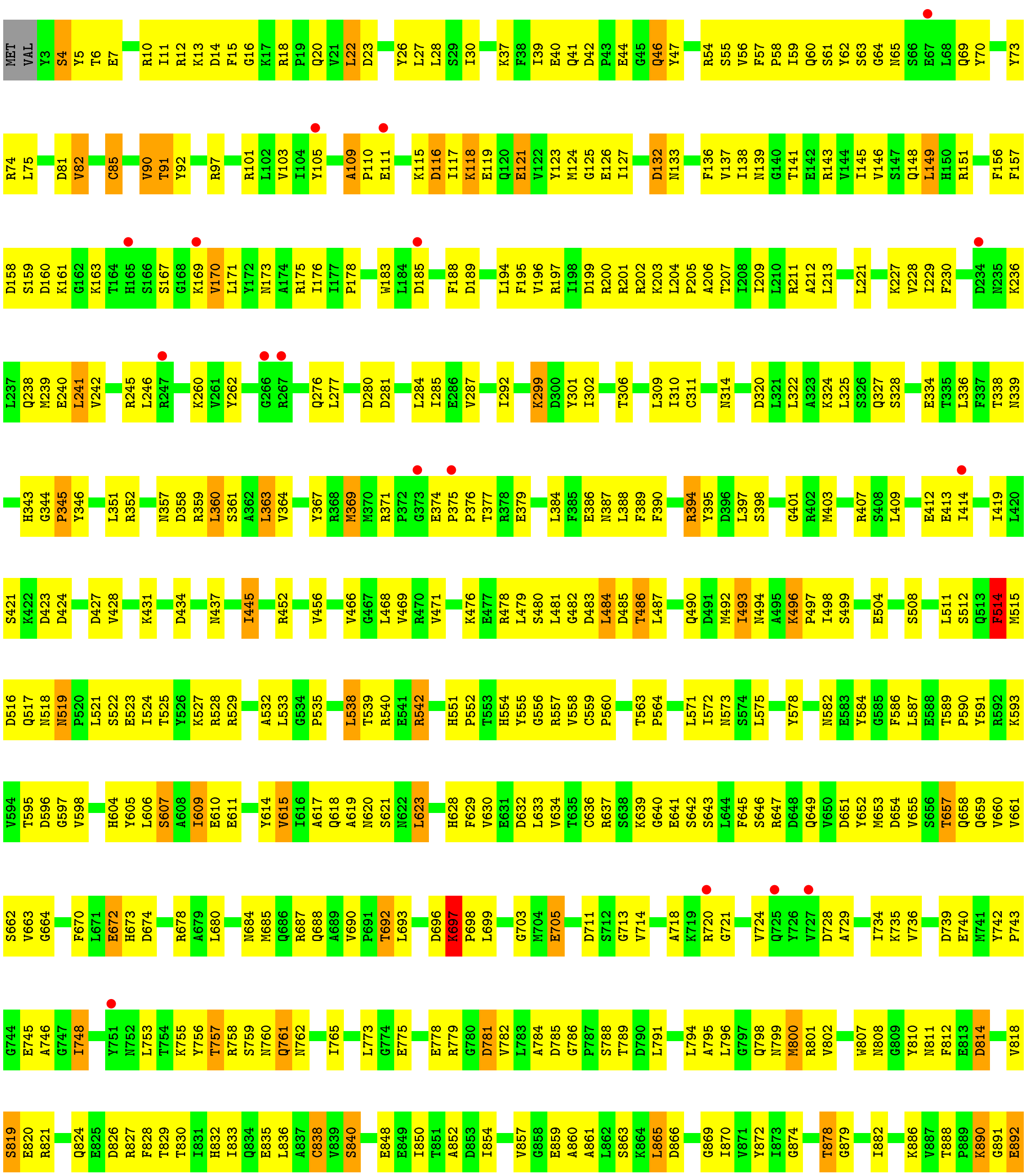
V137 I138 N139 G140 T141 E142 I145 V146 S147 Q148 L149 H150 R151 F156 F157 D158 S159 D160 K163 T164 H165 S166 S167 G168 K169 V170 L171 Y172 N173 A174 R175 I176 I177 P178 Y179 W183 L184 D185 D189 P190 K191 D192 N193 L194 F195 V196 D199 R200 R201 R202 K203 I208 I209
L210 R211 A212 L213 N214 Y215 L221 F224 F225 V228 I229 F230 E231 I232 N235 K236 M239 E240 L241 V242 P243 E244 R245 L246 R247 T250 A251 E256 A257 N258 V261 Y262 V263 E264 R267 R268 I269 T270 A271 R272 H273 I274 R275 Q276 D280 D281 V282 K283 L284 I285
E286 V287 P288 V289 I292 V296 V297 A298 K299 D300 Y301 I302 T306 L309 I310 C311 A312 A313 N314 M315 E316 L317 S318 L319 D320 L321 L322 A323 K324 L325 S326 Q327 S328 G329 H330 K331 R332 T335 L336 G344 P345 Y346 I347 T356 N357 D358 R359 L360 S361 A362 L363 V364 E365
I366 V367 R368 M369 M370 T377 R378 E379 A380 A381 E382 S383 L384 N387 L388 F389 R394 Y395 D396 L397 S398 A399 V400 G401 K404 L409 E412 E413 I419 D423 V428 K431 D434 I445 D446 H447 L448 R451 R452 I453 R454 S455 V456 G457 E461
F464 R465 V466 G467 L468 V469 R470 V471 E472 R473 A474 Y475 K476 E477 R478 L479 S480 L481 G482 D483 L484 D485 T486 L487 M488 P489 Q490 D491 M492 I493 N494 A495 K496 P497 I498 S499 K503 E504 F505 F506 Q510 L511 S512 Q513 D516 Q517 N518 N519 P520 L521 S522 E523 I524 T525 Y526 K527 R528
R529 I530 G534 L538 T539 R540 E541 R542 A543 G544 V547 R548 H551 P552 T553 H554 Y555 G556 R557 Y558 C559 P560 I561 E562 T563 P564 E565 G566 P567 N568 I569 G570 L571 I572 N573 S574 L575 Y578 N582 E583 Y584 G585 F586 L587 E588 T589 P590 Y591 R592 K593 V594 T595 D596 G597
V598 D601 E602 I603 H604 Y605 L606 S607 A608 I609 V615 I616 A617 Q618 A619 N620 S621 N622 L623 D624 E625 E626 G627 H628 F629 V630 E631 D632 L633 V634 T635 G636 R637 S638 K639 G640 E641 S642 F645 S646 R647 D648 Q649 V650 D651 Y652 M653 D654 V655 S656 T657 Q658 Q659 V660 V661 S662 V663
G664 A665 S666 L667 I668 P669 F670 L671 E672 H673 A676 N677 R678 A679 L680 M681 G682 A683 N684 M685 Q686 R687 T692 L693 R694 A695 D696 K697 P698 L699 V700 G701 T702 G703 M704 E705 R706 A707 V708 A709 V710 D711 S712 G713 V714 V717 A718 K719 R720 G721 V724 Q725 Y726 D728 A729
I732 V736 E740 E745 A746 G747 I748 K755 Y756 T757 R758 S759 N760 Q761 N762 T763 C764 N768 P769 C770 L773 G774 E775 P776 R779 G780 D781 V782 L783 A784 S788 L791 G792 E793 L794 A795 L796 G797 Q798 N799 M800 R801 V802 M805 P806 M807 Y810 N811
F812 E813 D814 S815 I816 L817 V818 S819 E820 R821 Q824 E825 D826 R827 F828 T829 T830 I831 H832 I833 Q834 E835 L836 A837 C838 V839 S840 R841 D842 I850 V857 G858 E859 L862 S863 K864 L865 D866 E867 I870 V871 Y872 I873 V877 T878 G879 G880 D881 I882 L883 V884 G885 K886 V887
K890 G891 E892 T893 Q894 L895 T896 P897 E898 E899 I905 F906 S911 D912 V913 S916 S917 L918 R919 I929 D930 V931 P934 T935 R936 E940 K941 D942 K943 R944 A945 L946 N951 Q952 L953 K958 D959 L960 S961 E962 E963 L967 R974 I975 R976 L979 V980
V984 E985 A986 E987 K988 L989 D990 K991 L992 P993 R994 D995 R996 W997 L998 E999 L1000 G1001 L1002 T1003 D1004 E1005 E1006 K1007 Q1008 N1009 Q1010 L1011 E1012 Q1013 L1014 Q1017 L1021 K1022 H1023 E1024 F1025 E1026 K1027 E1030 R1033 R1034 K1035 Q1038 G1039 D1040 D1041 L1042 A1043 P1044 G1045 V1046 L1047 K1048 I1049
V1052 Y1053 R1058 R1059 I1060 Q1061 P1062 K1065 M1066 A1067 G1068 R1069 H1070 G1071 N1072 K1073 G1074 V1075 I1076 S1077 K1078 I1079 N1080 P1081 I1082 E1083 D1084 M1085 P1086 Y1087 G1091 V1094 D1095 I1096 N1099 P1100 L1101 G1102 V1103 P1104 S1105 R1106 M1107 N1108 I1109 G1110 Q1111 I1112 L1113 E1114 T1115 H1116 L1117 G1118
M1119 A1120 G1123 I1124 N1129 A1130 M1131 Q1134 Q1135 Q1136 E1137 K1140 L1141 R1142 E1143 F1144 I1145 Q1146 R1147 A1148 Y1149 D1150 L1151 G1152 A1153 R1156 Q1157 K1158 V1159 D1160 L1161 F1164 S1165 E1168 V1169 M1170 R1171 L1172 A1173 E1174 N1175 L1176 R1177 K1178 G1179 M1180 P1181 I1182 A1183 T1184 P1185 V1186 F1187

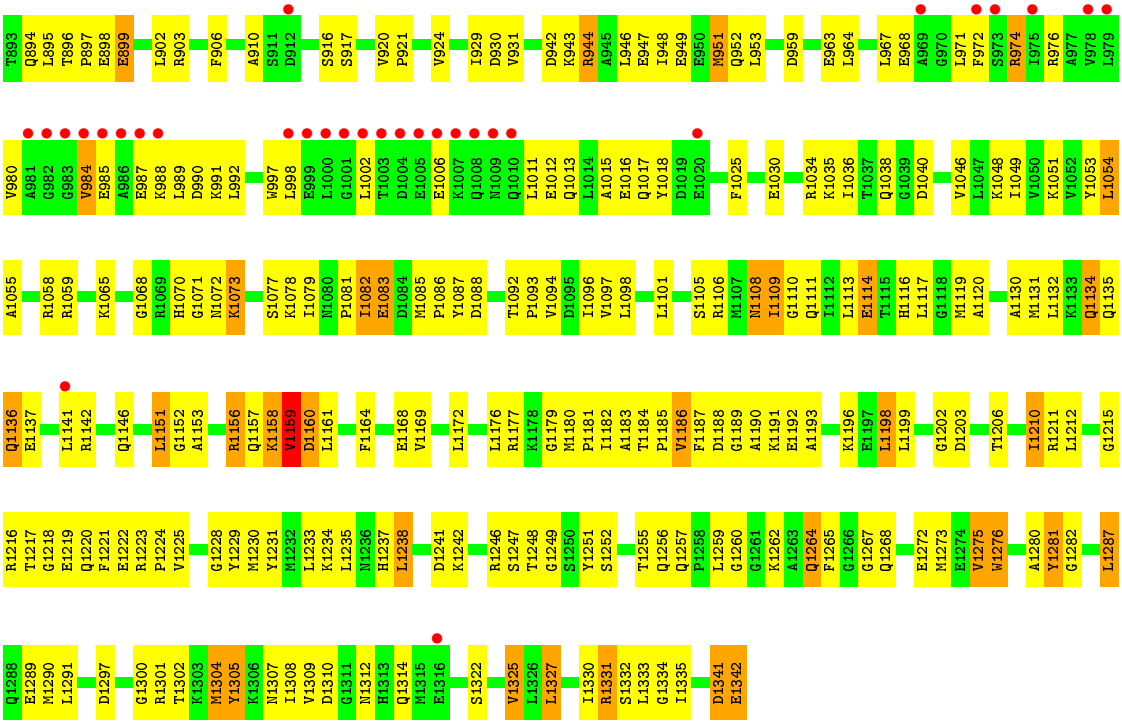


• Molecule 2: DNA-directed RNA polymerase subunit beta

Chain I:

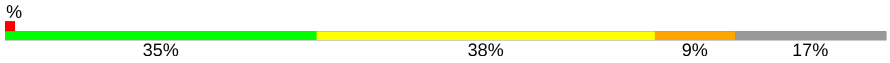


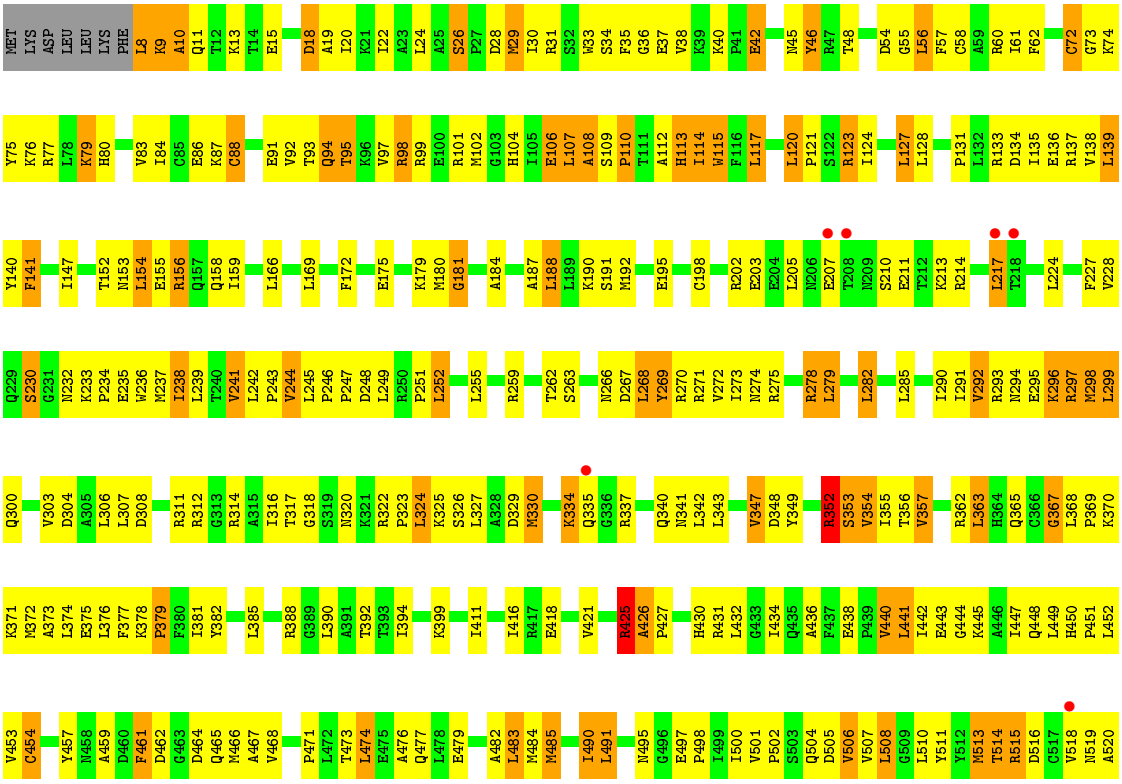


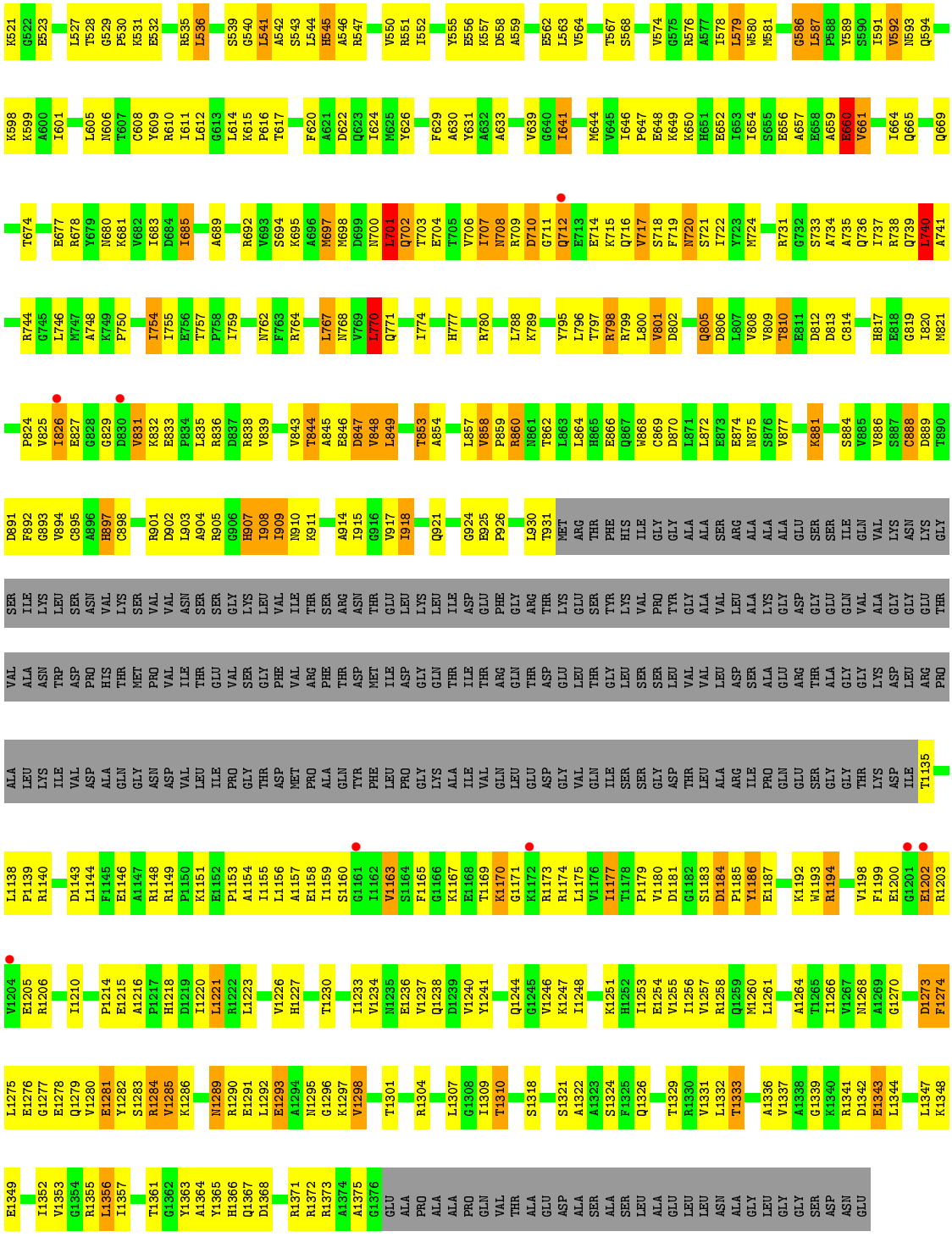


• Molecule 3: DNA-directed RNA polymerase subunit beta'

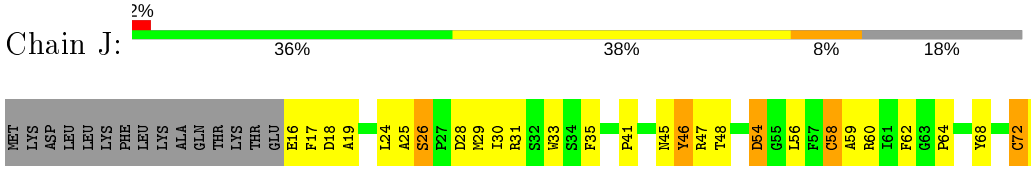
Chain D:

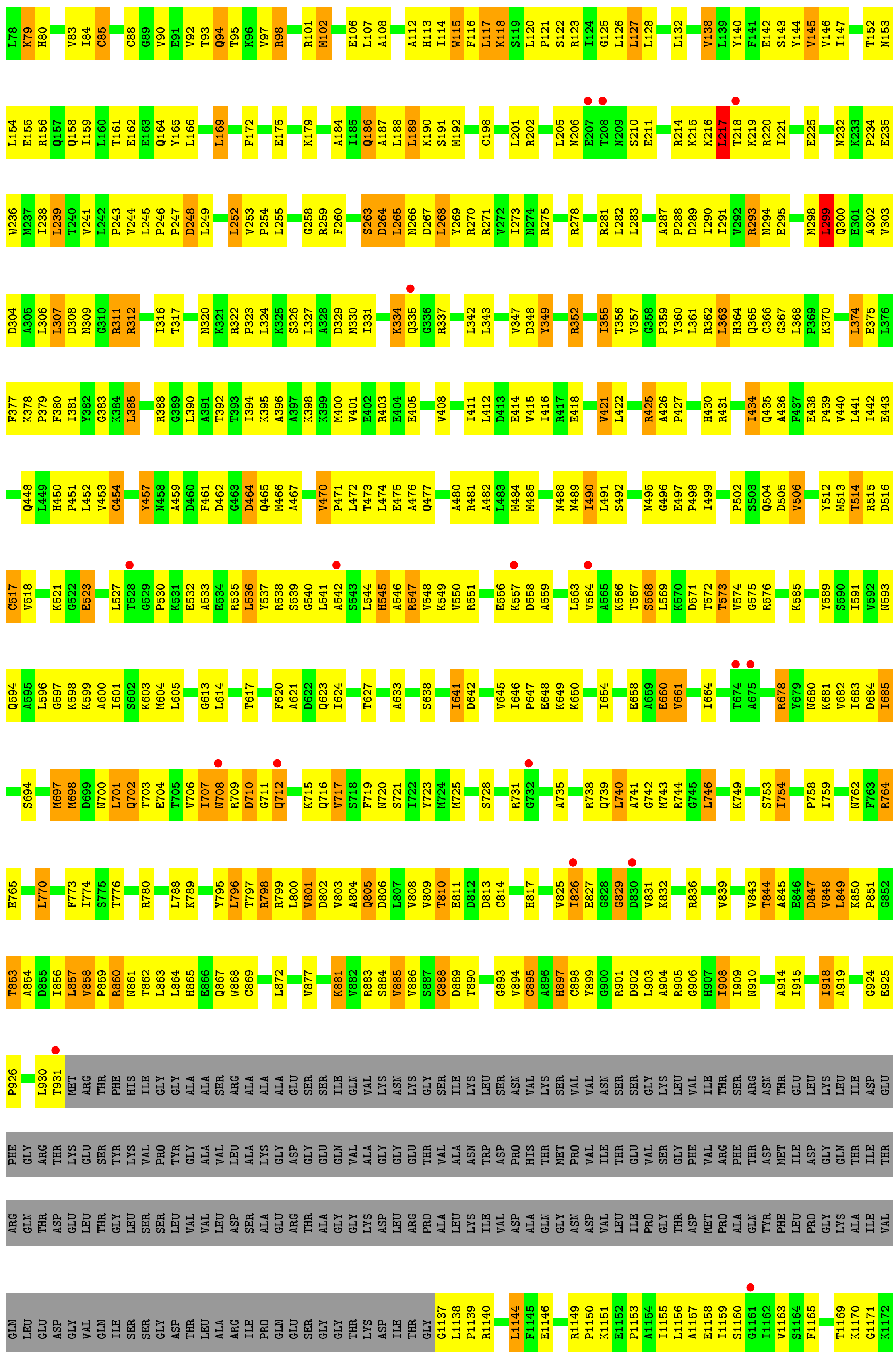






• Molecule 3: DNA-directed RNA polymerase subunit beta'

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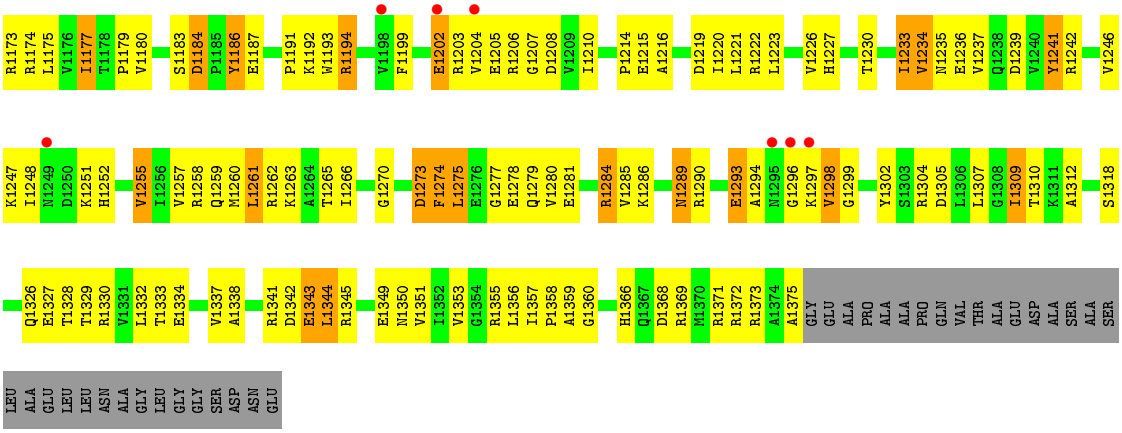
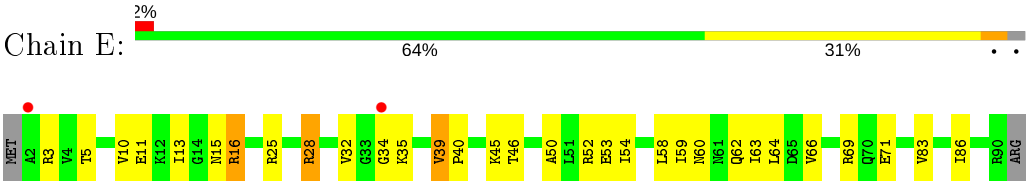
W236 M237 I238 L239 T240 V241 L242 P243 V244 L245 P246 P247 D248 L249 L252 V253 P254 L255 G258 R259 F260 S263 D264 L265 N266 D267 L268 Y269 R270 R271 V272 I273 N274 R275 R278 R281 L282 L283 A287 P288 D289 I290 I291 V292 R293 N294 E295 M298 L299 Q300 E301 A302 V303
D304 A305 L306 L307 D308 N309 G310 R311 R312 I316 T317 N320 K321 R322 P323 L324 K325 S326 L327 A328 D329 M330 I331 K334 Q335 G336 R337 L342 L343 V347 D348 Y349 R352 I355 T356 V357 G358 P359 Y360 L361 R362 L363 H364 Q365 C366 G367 L368 P369 K370 L374 E375 L376
P377 K378 P379 F380 I381 Y382 G383 K384 L385 R388 G389 L390 A391 T392 T393 I394 K395 A396 A397 K398 K399 M400 V401 E402 R403 E404 E405 V408 I411 L412 D413 E414 V415 I416 R417 E418 V421 L422 R425 A426 P427 H430 R431 I434 Q435 A436 F437 E438 P439 V440 L441 I442 E443
Q448 L449 H450 P451 L452 V453 C454 Y457 N458 A459 D460 F461 D462 G463 D464 Q465 M466 A467 V470 P471 L472 T473 L474 E475 A476 Q477 A480 R481 A482 L483 M484 M485 N488 N489 I490 L491 S492 N495 G496 E497 P498 I499 P502 S503 Q504 D505 V506 Y512 M513 T514 R515 D516
C517 V518 K521 G522 E523 L527 T528 G529 P530 K531 E532 A533 E534 R535 L536 Y537 R538 S539 G540 L541 A542 S543 L544 H545 A546 R547 V548 K549 V550 R551 E556 K557 D558 A559 L563 V564 A565 K566 T567 S568 L569 K570 D571 T572 T573 V574 G575 R576 K585 Y589 S590 I591 V592 N593
Q594 A595 L596 G597 K598 K599 A600 I601 S602 K603 M604 L605 G613 L614 T617 F620 A621 D622 Q623 I624 T627 A633 S638 I641 D642 V645 I646 P647 E648 K649 K650 I654 E658 A659 E660 V661 I664 T674 A675 R678 Y679 N680 K681 V682 I683 D684 I685
S694 M697 M698 D699 N700 L701 Q702 T703 E704 T705 V706 I707 N708 R709 D710 G711 Q712 K715 Q716 V717 S718 F719 N720 S721 I722 Y723 M724 M725 S728 R731 G732 A735 R738 Q739 L740 A741 G742 M743 R744 G745 L746 K749 S753 I754 P758 I759 N762 F763 R764
E765 L770 F773 I774 S775 T776 R780 L788 K789 Y795 L796 T797 R798 R799 L800 Y801 D802 V803 A804 Q805 D806 L807 V808 V809 T810 E811 D812 D813 C814 H817 V825 I826 E827 G828 G829 D830 V831 K832 R836 V839 V843 T844 A845 E846 D847 V848 L849 K850 P851 G852
T853 A854 D855 I856 L857 V858 P859 R860 N861 T862 L863 L864 H865 E866 Q867 W868 C869 L872 V877 K881 V882 R883 S884 V885 V886 S887 C888 D889 T890 G893 V894 C895 A896 H897 C898 Y899 G900 R901 D902 L903 A904 R905 G906 H907 I908 I909 N910 A914 I915 I918 A919 G924 E925
P926 L930 T931 MET ARG THR PHE HIS ILE GLY GLY ALA ALA SER ARG ALA ALA ALA GLU SER SER ILE GLN VAL LYS ASN LYS GLY SER ILE LYS LEU SER ASN VAL LYS SER VAL VAL ASN SER SER GLY LYS LEU VAL ILE THR SER ARG ASN THR GLU LEU LYS LEU ILE ASP GLU
PHE GLY ARG THR LYS GLU SER TYR LYS VAL PRO TYR GLY ALA VAL LEU ALA LYS GLY ASP GLY GLU GLN VAL ALA GLY GLU THR VAL ALA ASN TRP ASP PRO HIS THR MET PRO VAL ILE THR GLU VAL SER GLY PHE VAL ARG PHE THR ASP MET ILE ASP GLY GLN THR ILE THR
ARG GLN THR ASP GLU LEU THR GLY LEU SER SER LEU VAL VAL LEU ASP SER ALA GLU ARG THR ALA GLY GLY LYS ASP LEU ARG PRO ALA LEU LYS ILE VAL ASP ALA GLN GLY ASN ASP VAL LEU ILE PRO GLY THR ASP MET PRO ALA GLN TYR PHE LEU PRO GLY LYS ALA ILE VAL
GLN LEU GLU ASP GLY VAL GLN ILE SER SER GLY ASP THR LEU ALA ARG ILE PRO GLN GLU SER GLY GLY THR LYS ASP ILE THR GLY G1137 L1138 P1139 R1140 L1144 F1145 E1146 R1149 P1150 K1151 E1152 P1153 A1154 I1155 L1156 A1157 E1158 I1159 S1160 G1161 I1162 V1163 S1164 F1165 T1169 K1170 G1171 K1172



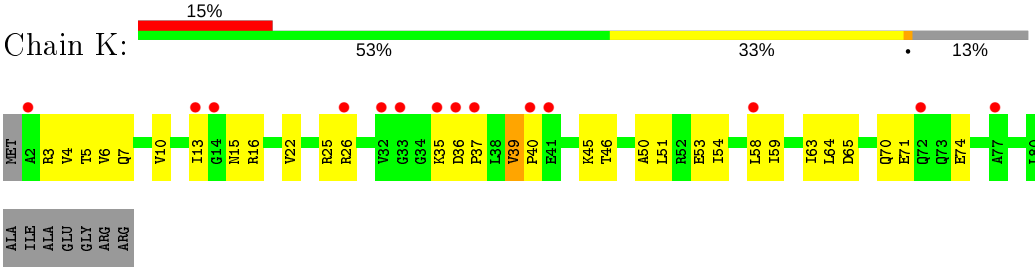
• Molecule 4: DNA-directed RNA polymerase subunit omega

Chain E:



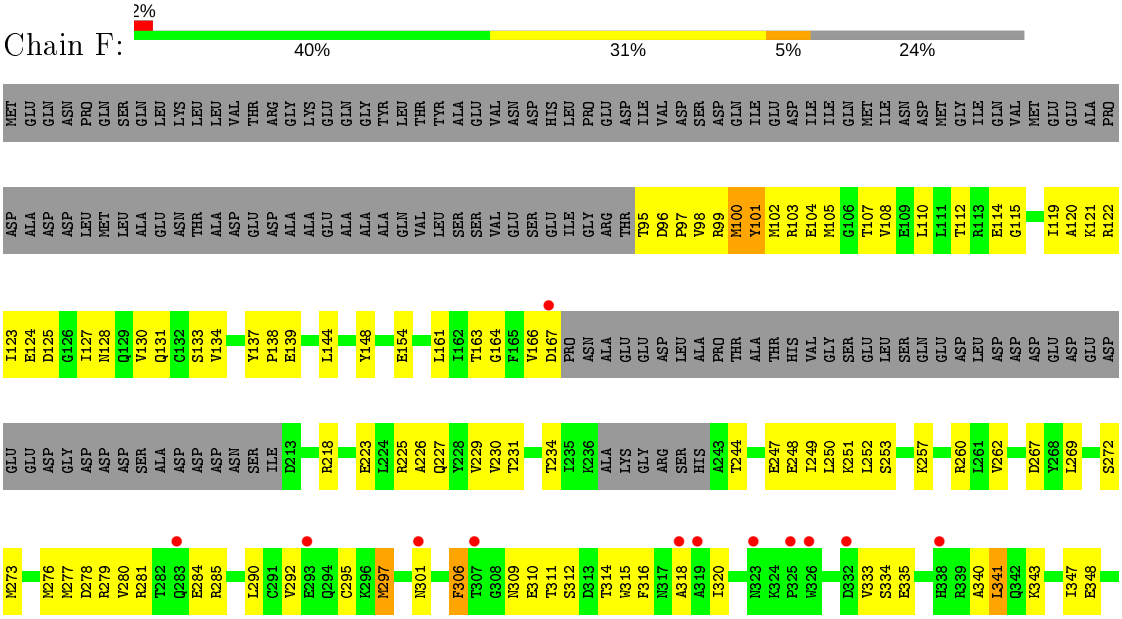
• Molecule 4: DNA-directed RNA polymerase subunit omega

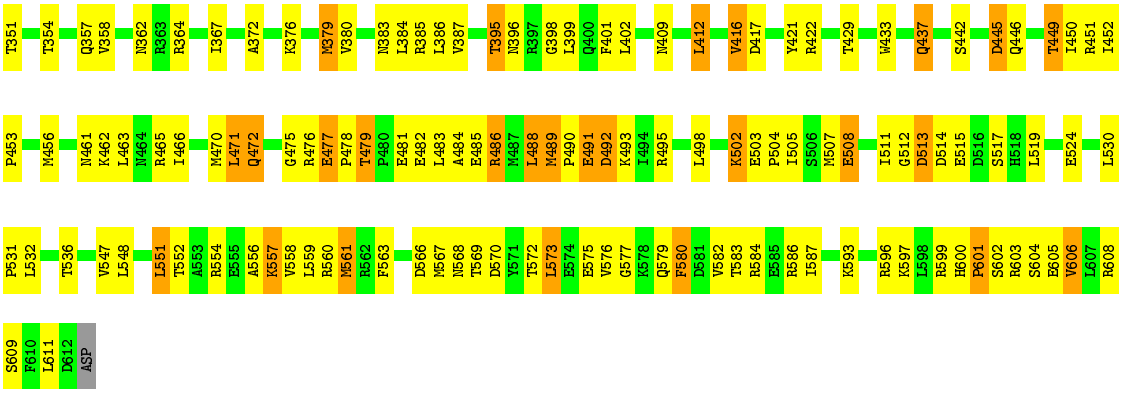
Chain K:



• Molecule 5: RNA polymerase sigma factor RpoD

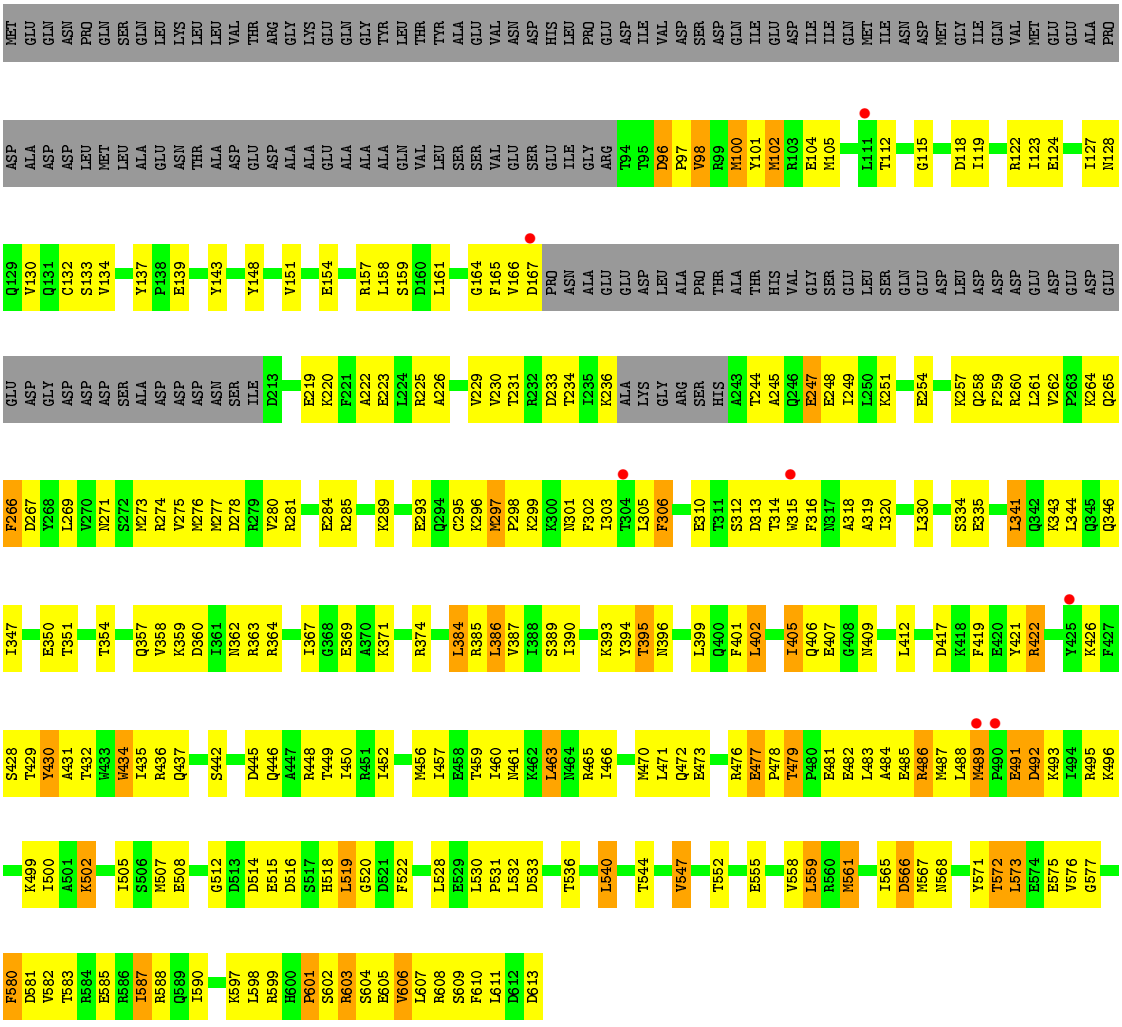
Chain F:





• Molecule 5: RNA polymerase sigma factor RpoD

Chain L:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	185.36Å 206.28Å 308.69Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.90 – 3.60 29.90 – 3.60	Depositor EDS
% Data completeness (in resolution range)	93.7 (29.90-3.60) 93.7 (29.90-3.60)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	2.01 (at 3.56Å)	Xtriage
Refinement program	PHENIX (1.10.1_2155: ???)	Depositor
R, R_{free}	0.246 , 0.305 0.246 , 0.304	Depositor DCC
R_{free} test set	1932 reflections (1.51%)	wwPDB-VP
Wilson B-factor (Å^2)	142.2	Xtriage
Anisotropy	0.225	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 91.1	EDS
L-test for twinning[2]	$< \|L\| > = 0.53$, $< L^2 > = 0.37$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	55699	wwPDB-VP
Average B, all atoms (Å^2)	157.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.74% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

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	A	0.84	4/2435 (0.2%)	1.07	12/3300 (0.4%)
1	B	0.75	1/1692 (0.1%)	1.01	5/2293 (0.2%)
1	G	0.58	0/1751	1.05	9/2373 (0.4%)
1	H	0.59	0/1686	0.91	4/2285 (0.2%)
2	C	1.17	37/10741 (0.3%)	1.21	65/14492 (0.4%)
2	I	0.80	7/10737 (0.1%)	0.97	15/14487 (0.1%)
3	D	1.21	60/9246 (0.6%)	1.24	74/12478 (0.6%)
3	J	1.02	27/9168 (0.3%)	1.13	52/12374 (0.4%)
4	E	0.65	0/693	0.83	0/935
4	K	0.38	0/629	0.61	0/847
5	F	0.82	2/3857 (0.1%)	1.05	10/5184 (0.2%)
5	L	0.77	3/3872 (0.1%)	0.99	12/5205 (0.2%)
All	All	0.98	141/56507 (0.2%)	1.10	258/76253 (0.3%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	G	0	1
2	C	0	11
2	I	0	2
3	D	0	12
3	J	0	9
5	F	0	1
5	L	0	1
All	All	0	39

All (141) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	C	811	ASN	CB-CG	-9.14	1.30	1.51
1	A	131	CYS	CB-SG	-8.93	1.67	1.82
3	J	145	VAL	CB-CG2	-8.81	1.34	1.52
2	C	636	CYS	CB-SG	-8.52	1.67	1.82
3	J	72	CYS	CB-SG	-7.87	1.68	1.82
3	D	814	CYS	CB-SG	-7.77	1.69	1.82
2	C	183	TRP	CB-CG	-7.71	1.36	1.50
3	J	115	TRP	CB-CG	-7.67	1.36	1.50
3	D	244	VAL	CB-CG1	-7.63	1.36	1.52
3	D	457	TYR	CE2-CZ	-7.57	1.28	1.38
1	B	131	CYS	CB-SG	-7.47	1.69	1.82
3	D	292	VAL	CB-CG1	-7.43	1.37	1.52
2	C	1285	TYR	CB-CG	-7.33	1.40	1.51
3	D	303	VAL	CB-CG2	-7.26	1.37	1.52
2	C	764	CYS	CB-SG	-7.18	1.70	1.82
3	D	349	TYR	CE2-CZ	-7.18	1.29	1.38
3	D	426	ALA	C-N	-7.16	1.20	1.34
3	J	1353	VAL	CB-CG1	-7.15	1.37	1.52
2	C	1076	ILE	CB-CG2	-7.15	1.30	1.52
3	D	349	TYR	CG-CD1	-7.14	1.29	1.39
3	D	868	TRP	CB-CG	-7.04	1.37	1.50
3	D	511	TYR	CD2-CE2	-7.02	1.28	1.39
3	D	72	CYS	CB-SG	-6.99	1.70	1.82
2	C	1276	TRP	CB-CG	-6.92	1.37	1.50
3	J	198	CYS	CB-SG	-6.90	1.70	1.82
2	C	807	TRP	CB-CG	-6.89	1.37	1.50
3	D	457	TYR	CD2-CE2	-6.89	1.29	1.39
2	C	838	CYS	CB-SG	-6.83	1.70	1.82
3	J	145	VAL	CB-CG1	-6.81	1.38	1.52
2	I	1275	VAL	CB-CG2	-6.77	1.38	1.52
3	D	1337	VAL	CB-CG1	-6.71	1.38	1.52
2	I	1281	TYR	CE1-CZ	-6.60	1.29	1.38
3	D	894	VAL	CB-CG1	-6.59	1.39	1.52
2	I	1276	TRP	CE3-CZ3	-6.53	1.27	1.38
3	J	349	TYR	CE1-CZ	-6.51	1.30	1.38
3	D	917	VAL	CB-CG2	-6.46	1.39	1.52
3	D	895	CYS	CB-SG	-6.43	1.71	1.82
3	D	347	VAL	CB-CG2	-6.42	1.39	1.52
5	L	96	ASP	C-N	-6.42	1.22	1.34
3	J	85	CYS	CB-SG	-6.38	1.71	1.82
3	D	453	VAL	CB-CG1	-6.37	1.39	1.52
3	J	885	VAL	CB-CG1	-6.37	1.39	1.52
2	I	1325	VAL	CB-CG2	-6.34	1.39	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	D	236	TRP	CB-CG	-6.34	1.38	1.50
3	J	303	VAL	CB-CG1	-6.32	1.39	1.52
2	C	137	VAL	CB-CG2	-6.31	1.39	1.52
3	D	236	TRP	CG-CD1	-6.28	1.27	1.36
3	J	801	VAL	CB-CG2	-6.24	1.39	1.52
3	D	898	CYS	CB-SG	-6.23	1.71	1.82
3	D	115	TRP	CB-CG	-6.22	1.39	1.50
5	F	101	TYR	CD2-CE2	-6.21	1.30	1.39
2	I	1305	TYR	CD1-CE1	-6.19	1.30	1.39
2	C	663	VAL	CB-CG2	-6.13	1.40	1.52
2	C	660	VAL	CB-CG1	-6.02	1.40	1.52
2	C	1096	ILE	CB-CG2	-6.01	1.34	1.52
3	J	303	VAL	CB-CG2	-6.01	1.40	1.52
2	C	85	CYS	CB-SG	-6.01	1.72	1.82
2	C	934	PHE	CD2-CE2	-6.01	1.27	1.39
2	C	1329	GLU	CG-CD	-5.99	1.43	1.51
3	D	421	VAL	CB-CG1	-5.99	1.40	1.52
3	D	639	VAL	CB-CG1	-5.98	1.40	1.52
3	D	457	TYR	CG-CD1	-5.97	1.31	1.39
2	C	592	ARG	CB-CG	-5.97	1.36	1.52
3	J	307	LEU	CG-CD2	-5.97	1.29	1.51
3	J	421	VAL	CB-CG1	-5.96	1.40	1.52
5	L	434	TRP	CB-CG	-5.95	1.39	1.50
3	D	115	TRP	CE3-CZ3	-5.93	1.28	1.38
3	D	354	VAL	CB-CG2	-5.92	1.40	1.52
3	D	1363	TYR	CD2-CE2	-5.91	1.30	1.39
3	J	894	VAL	CB-CG1	-5.89	1.40	1.52
3	D	511	TYR	CB-CG	-5.82	1.43	1.51
2	C	505	PHE	CB-CG	-5.76	1.41	1.51
3	D	631	TYR	CE2-CZ	-5.76	1.31	1.38
3	D	454	CYS	CB-SG	-5.73	1.72	1.81
3	D	511	TYR	CD1-CE1	-5.72	1.30	1.39
3	D	608	CYS	CB-SG	-5.72	1.72	1.81
2	C	1069	ARG	CG-CD	-5.71	1.37	1.51
2	C	663	VAL	CB-CG1	-5.68	1.41	1.52
3	J	868	TRP	CB-CG	-5.66	1.40	1.50
3	J	144	TYR	CE2-CZ	-5.66	1.31	1.38
2	C	1281	TYR	CE2-CZ	-5.63	1.31	1.38
2	C	464	PHE	CB-CG	-5.63	1.41	1.51
3	D	468	VAL	CB-CG1	-5.62	1.41	1.52
3	D	347	VAL	CB-CG1	-5.62	1.41	1.52
3	D	801	VAL	CB-CG1	-5.60	1.41	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	J	895	CYS	CB-SG	-5.60	1.72	1.81
3	D	438	GLU	CG-CD	5.59	1.60	1.51
3	D	421	VAL	CB-CG2	-5.55	1.41	1.52
2	C	810	TYR	CG-CD1	-5.53	1.31	1.39
3	J	512	TYR	CD2-CE2	-5.51	1.31	1.39
3	J	723	TYR	CE1-CZ	-5.51	1.31	1.38
3	J	457	TYR	CD2-CE2	-5.45	1.31	1.39
3	D	592	VAL	CB-CG1	-5.45	1.41	1.52
2	C	810	TYR	CB-CG	-5.44	1.43	1.51
3	J	512	TYR	CD1-CE1	-5.43	1.31	1.39
3	D	660	GLU	CB-CG	-5.43	1.41	1.52
3	D	141	PHE	CB-CG	-5.40	1.42	1.51
2	C	659	GLN	CB-CG	-5.39	1.38	1.52
2	I	899	GLU	CG-CD	-5.39	1.43	1.51
3	D	138	VAL	CB-CG2	-5.37	1.41	1.52
3	D	269	TYR	CD1-CE1	-5.37	1.31	1.39
3	D	292	VAL	CB-CG2	-5.36	1.41	1.52
3	D	1331	VAL	CB-CG2	-5.35	1.41	1.52
2	C	770	CYS	CB-SG	-5.35	1.73	1.81
3	D	357	VAL	CB-CG2	-5.34	1.41	1.52
2	C	1305	TYR	CG-CD2	-5.34	1.32	1.39
3	D	120	LEU	C-N	-5.32	1.24	1.34
3	J	241	VAL	CB-CG1	-5.32	1.41	1.52
3	D	349	TYR	CE1-CZ	-5.30	1.31	1.38
2	I	1305	TYR	CB-CG	-5.30	1.43	1.51
1	A	68	TYR	CD1-CE1	-5.30	1.31	1.39
2	C	389	PHE	CB-CG	-5.30	1.42	1.51
3	D	57	PHE	CB-CG	-5.29	1.42	1.51
3	D	801	VAL	CB-CG2	-5.29	1.41	1.52
3	J	1241	TYR	CE1-CZ	-5.28	1.31	1.38
3	D	1363	TYR	CD1-CE1	-5.28	1.31	1.39
3	D	123	ARG	CB-CG	-5.26	1.38	1.52
2	C	505	PHE	CD1-CE1	-5.26	1.28	1.39
1	A	180	VAL	CB-CG1	-5.25	1.41	1.52
2	C	782	VAL	CB-CG1	-5.23	1.41	1.52
3	J	295	GLU	CB-CG	-5.23	1.42	1.52
3	D	440	VAL	CB-CG1	-5.21	1.42	1.52
5	L	522	PHE	CB-CG	-5.19	1.42	1.51
2	C	708	VAL	CB-CG1	-5.17	1.42	1.52
2	C	816	ILE	CB-CG2	-5.14	1.36	1.52
2	C	530	ILE	CB-CG2	-5.11	1.37	1.52
2	C	700	VAL	CB-CG1	-5.09	1.42	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	J	517	CYS	CB-SG	-5.09	1.73	1.81
1	A	187	VAL	CB-CG1	-5.09	1.42	1.52
2	C	456	VAL	CB-CG1	-5.09	1.42	1.52
3	D	269	TYR	CD2-CE2	-5.09	1.31	1.39
2	C	884	VAL	CB-CG1	-5.07	1.42	1.52
3	D	272	VAL	CB-CG2	-5.07	1.42	1.52
3	D	349	TYR	CB-CG	-5.07	1.44	1.51
5	F	508	GLU	CB-CG	-5.07	1.42	1.52
3	D	1353	VAL	CB-CG2	-5.03	1.42	1.52
3	D	461	PHE	CG-CD2	-5.02	1.31	1.38
3	D	353	SER	CB-OG	-5.01	1.35	1.42
3	D	1337	VAL	CB-CG2	-5.01	1.42	1.52
2	C	934	PHE	CD1-CE1	-5.01	1.29	1.39
3	J	116	PHE	CE2-CZ	-5.01	1.27	1.37

All (258) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	C	1287	LEU	CB-CG-CD2	-14.16	86.92	111.00
3	D	376	LEU	CB-CG-CD2	-10.83	92.59	111.00
3	D	114	ILE	CG1-CB-CG2	-10.71	87.84	111.40
2	C	796	LEU	CB-CG-CD2	-9.94	94.10	111.00
3	D	188	LEU	CB-CG-CD2	-9.88	94.20	111.00
3	J	117	LEU	CB-CG-CD1	-9.86	94.25	111.00
3	D	888	CYS	CA-CB-SG	-9.74	96.47	114.00
3	J	1261	LEU	CB-CG-CD2	-9.68	94.54	111.00
3	D	245	LEU	CB-CG-CD2	-8.95	95.79	111.00
3	D	299	LEU	CB-CG-CD1	-8.92	95.84	111.00
3	D	541	LEU	CA-CB-CG	-8.91	94.81	115.30
3	J	307	LEU	CB-CG-CD2	-8.91	95.86	111.00
3	J	189	LEU	CA-CB-CG	-8.89	94.86	115.30
2	I	1327	LEU	CA-CB-CG	-8.81	95.04	115.30
2	C	680	LEU	CB-CG-CD1	-8.73	96.16	111.00
2	C	758	ARG	NE-CZ-NH2	-8.72	115.94	120.30
2	C	42	ASP	C-N-CD	-8.71	101.43	120.60
2	C	49	LEU	CA-CB-CG	-8.58	95.57	115.30
1	B	9	LEU	C-N-CA	8.54	143.04	121.70
3	D	117	LEU	CB-CG-CD1	-8.52	96.52	111.00
2	C	32	LEU	CB-CG-CD2	-8.47	96.61	111.00
3	J	198	CYS	CA-CB-SG	-8.42	98.85	114.00
1	G	54	CYS	CA-CB-SG	-8.37	98.94	114.00
3	D	1261	LEU	CB-CG-CD2	-8.28	96.92	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	C	865	LEU	CB-CG-CD2	-8.20	97.06	111.00
5	L	519	LEU	CB-CG-CD2	-8.19	97.08	111.00
3	J	239	LEU	CB-CG-CD2	-8.17	97.11	111.00
3	D	271	ARG	NE-CZ-NH1	-8.16	116.22	120.30
5	L	384	LEU	CB-CG-CD2	-8.15	97.14	111.00
1	A	29	GLU	C-N-CD	-8.09	102.81	120.60
2	C	575	LEU	CB-CG-CD1	-8.09	97.25	111.00
5	F	412	LEU	CB-CG-CD1	-7.93	97.52	111.00
3	D	123	ARG	CG-CD-NE	-7.87	95.27	111.80
2	C	1161	LEU	CA-CB-CG	-7.80	97.35	115.30
1	G	68	TYR	CB-CG-CD2	-7.80	116.32	121.00
2	C	1278	LEU	CB-CG-CD1	-7.73	97.85	111.00
1	G	48	LEU	CA-CB-CG	-7.73	97.53	115.30
2	C	540	ARG	NE-CZ-NH1	-7.72	116.44	120.30
3	J	245	LEU	CB-CG-CD1	-7.71	97.89	111.00
3	J	888	CYS	CA-CB-SG	-7.71	100.13	114.00
2	C	836	LEU	CB-CG-CD2	-7.69	97.92	111.00
2	C	1291	LEU	CB-CG-CD2	-7.65	98.00	111.00
3	J	434	ILE	CG1-CB-CG2	-7.50	94.90	111.40
5	F	379	MET	CA-CB-CG	-7.46	100.62	113.30
3	J	1344	LEU	CA-CB-CG	-7.40	98.27	115.30
1	H	228	LEU	CA-CB-CG	-7.38	98.33	115.30
1	G	68	TYR	CB-CG-CD1	7.36	125.42	121.00
2	C	680	LEU	CA-CB-CG	7.33	132.16	115.30
2	C	800	MET	CG-SD-CE	7.31	111.90	100.20
3	D	282	LEU	CB-CG-CD2	-7.31	98.57	111.00
3	D	441	LEU	CB-CG-CD1	-7.31	98.57	111.00
2	C	699	LEU	CA-CB-CG	-7.29	98.52	115.30
3	J	166	LEU	CB-CG-CD2	-7.22	98.72	111.00
3	J	470	VAL	C-N-CD	-7.22	104.72	120.60
3	J	127	LEU	CB-CG-CD2	-7.15	98.84	111.00
5	F	519	LEU	CA-CB-CG	-7.12	98.91	115.30
3	J	217	LEU	CA-CB-CG	7.11	131.66	115.30
3	D	918	ILE	CG1-CB-CG2	-7.08	95.81	111.40
5	F	602	SER	N-CA-C	-7.08	91.87	111.00
1	A	54	CYS	CA-CB-SG	-7.07	101.28	114.00
2	I	1287	LEU	CB-CG-CD2	-7.03	99.04	111.00
2	C	96	LEU	CA-CB-CG	-7.03	99.13	115.30
2	I	363	LEU	CA-CB-CG	-7.03	99.14	115.30
3	J	1233	ILE	CG1-CB-CG2	-7.02	95.96	111.40
2	I	241	LEU	CA-CB-CG	-6.92	99.38	115.30
3	J	307	LEU	CA-CB-CG	-6.89	99.45	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	L	540	LEU	CB-CG-CD2	-6.86	99.34	111.00
1	B	85	LEU	CA-CB-CG	-6.82	99.61	115.30
2	C	762	ASN	C-N-CA	-6.80	104.69	121.70
2	C	1101	LEU	CB-CG-CD2	-6.80	99.45	111.00
2	C	75	LEU	CB-CG-CD1	-6.78	99.48	111.00
3	D	416	ILE	CG1-CB-CG2	-6.77	96.50	111.40
2	C	1151	LEU	CA-CB-CG	-6.76	99.74	115.30
2	C	1327	LEU	CB-CG-CD2	-6.76	99.50	111.00
3	D	1361	THR	CA-CB-CG2	-6.75	102.96	112.40
2	C	818	VAL	CA-CB-CG2	-6.74	100.80	110.90
3	J	118	LYS	CD-CE-NZ	6.72	127.16	111.70
5	F	498	LEU	CB-CG-CD1	-6.69	99.62	111.00
2	C	1333	LEU	CB-CG-CD2	-6.68	99.64	111.00
3	J	1144	LEU	CA-CB-CG	-6.67	99.96	115.30
3	D	1355	ARG	NE-CZ-NH1	-6.67	116.97	120.30
2	C	28	LEU	CA-CB-CG	-6.64	100.03	115.30
2	I	838	CYS	CA-CB-SG	-6.62	102.09	114.00
2	C	1326	LEU	CB-CG-CD1	-6.61	99.76	111.00
1	B	28	LEU	CA-CB-CG	-6.61	100.11	115.30
3	J	162	GLU	CA-CB-CG	6.53	127.76	113.40
2	C	668	ILE	CG1-CB-CG2	-6.49	97.12	111.40
3	D	166	LEU	CB-CG-CD1	-6.47	100.00	111.00
3	D	508	LEU	CB-CG-CD1	-6.46	100.03	111.00
2	I	149	LEU	CB-CG-CD1	-6.45	100.03	111.00
3	D	299	LEU	CA-CB-CG	-6.45	100.48	115.30
3	J	1261	LEU	CB-CG-CD1	-6.43	100.07	111.00
3	J	289	ASP	CB-CG-OD1	-6.43	112.52	118.30
3	D	279	LEU	CB-CG-CD2	-6.41	100.10	111.00
3	J	374	LEU	CA-CB-CG	6.41	130.03	115.30
5	L	405	ILE	CG1-CB-CG2	-6.39	97.35	111.40
2	C	454	ARG	NE-CZ-NH2	-6.38	117.11	120.30
2	C	1303	LYS	CA-CB-CG	6.38	127.43	113.40
2	C	454	ARG	CG-CD-NE	-6.37	98.42	111.80
2	C	1176	LEU	CB-CG-CD2	-6.37	100.17	111.00
2	C	367	TYR	CB-CG-CD1	-6.36	117.18	121.00
3	J	126	LEU	CA-CB-CG	6.35	129.91	115.30
1	G	142	MET	CA-CB-CG	-6.34	102.52	113.30
3	D	297	ARG	NE-CZ-NH1	-6.32	117.14	120.30
5	L	559	LEU	CA-CB-CG	-6.32	100.76	115.30
2	C	1113	LEU	CB-CG-CD2	-6.31	100.27	111.00
2	C	367	TYR	CB-CG-CD2	6.29	124.77	121.00
5	L	386	LEU	CB-CG-CD2	-6.27	100.34	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	C	800	MET	CB-CG-SD	-6.25	93.64	112.40
1	A	316	MET	CA-CB-CG	-6.25	102.67	113.30
1	G	79	LEU	CB-CG-CD2	-6.22	100.43	111.00
5	F	519	LEU	CB-CG-CD1	-6.21	100.45	111.00
3	D	180	MET	CG-SD-CE	6.15	110.04	100.20
3	D	324	LEU	CB-CG-CD2	-6.15	100.55	111.00
3	J	566	LYS	N-CA-CB	6.13	121.64	110.60
1	G	195	ARG	N-CA-CB	6.12	121.62	110.60
3	D	449	LEU	CB-CG-CD2	-6.12	100.59	111.00
3	J	138	VAL	CG1-CB-CG2	-6.11	101.13	110.90
3	D	275	ARG	NE-CZ-NH1	-6.09	117.25	120.30
3	D	88	CYS	CA-CB-SG	-6.09	103.04	114.00
2	C	481	LEU	CA-CB-CG	6.07	129.26	115.30
5	L	402	LEU	CB-CG-CD2	-6.06	100.69	111.00
2	C	1281	TYR	C-N-CA	-6.04	109.62	122.30
3	D	740	LEU	CB-CG-CD1	-6.03	100.75	111.00
3	D	491	LEU	CB-CG-CD2	-6.00	100.81	111.00
2	C	513	GLN	CB-CA-C	-5.97	98.46	110.40
3	D	139	LEU	CB-CG-CD2	-5.95	100.88	111.00
3	J	723	TYR	CB-CG-CD2	5.95	124.57	121.00
1	B	131	CYS	CA-CB-SG	-5.94	103.30	114.00
3	J	464	ASP	CB-CG-OD1	5.93	123.64	118.30
3	J	58	CYS	CA-CB-SG	-5.89	103.40	114.00
3	J	268	LEU	CB-CG-CD2	-5.88	101.01	111.00
3	J	264	ASP	CB-CG-OD2	-5.86	113.03	118.30
3	D	770	LEU	CB-CG-CD1	-5.84	101.08	111.00
2	I	699	LEU	CA-CB-CG	5.83	128.71	115.30
3	D	608	CYS	CA-CB-SG	-5.82	103.53	114.00
3	J	249	LEU	CA-CB-CG	-5.79	101.99	115.30
3	D	107	LEU	CB-CG-CD2	-5.79	101.16	111.00
1	G	65	LEU	CA-CB-CG	5.76	128.56	115.30
3	D	515	ARG	N-CA-C	-5.75	95.47	111.00
3	D	701	LEU	CA-CB-CG	5.75	128.52	115.30
3	J	355	ILE	CG1-CB-CG2	-5.74	98.77	111.40
3	J	311	ARG	NE-CZ-NH2	-5.74	117.43	120.30
3	D	137	ARG	CG-CD-NE	-5.73	99.77	111.80
3	D	780	ARG	NE-CZ-NH2	5.72	123.16	120.30
3	D	56	LEU	CB-CG-CD1	-5.72	101.28	111.00
3	J	453	VAL	CG1-CB-CG2	-5.72	101.75	110.90
2	C	838	CYS	CA-CB-SG	-5.71	103.71	114.00
3	D	102	MET	CG-SD-CE	-5.71	91.06	100.20
3	J	263	SER	CB-CA-C	-5.71	99.25	110.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	J	293	ARG	NE-CZ-NH1	-5.71	117.45	120.30
3	D	579	LEU	CB-CG-CD1	-5.69	101.32	111.00
2	I	1304	MET	CB-CG-SD	-5.69	95.32	112.40
3	J	723	TYR	CB-CG-CD1	-5.69	117.58	121.00
3	D	449	LEU	CB-CG-CD1	-5.68	101.35	111.00
3	J	1247	LYS	CB-CG-CD	-5.67	96.85	111.60
3	D	432	LEU	CA-CB-CG	-5.65	102.31	115.30
2	C	484	LEU	CA-CB-CG	5.65	128.29	115.30
3	D	644	MET	CG-SD-CE	5.64	109.23	100.20
2	C	1232	MET	CG-SD-CE	5.63	109.21	100.20
2	I	336	LEU	CB-CG-CD2	-5.61	101.46	111.00
2	C	200	ARG	CG-CD-NE	-5.60	100.04	111.80
5	L	528	LEU	CB-CG-CD1	-5.60	101.48	111.00
3	J	1309	ILE	CG1-CB-CG2	-5.60	99.09	111.40
3	D	252	LEU	CB-CG-CD1	-5.59	101.49	111.00
3	D	296	LYS	CD-CE-NZ	5.59	124.56	111.70
3	D	511	TYR	CB-CG-CD2	-5.59	117.64	121.00
2	I	533	LEU	CB-CG-CD2	-5.59	101.49	111.00
2	I	865	LEU	CB-CG-CD2	-5.59	101.50	111.00
3	D	474	LEU	CB-CG-CD1	-5.58	101.51	111.00
2	C	363	LEU	CB-CG-CD2	-5.58	101.51	111.00
3	D	154	LEU	CB-CG-CD1	-5.58	101.52	111.00
3	D	268	LEU	CA-CB-CG	-5.54	102.55	115.30
2	C	678	ARG	NE-CZ-NH2	-5.54	117.53	120.30
3	D	127	LEU	CA-CB-CG	-5.54	102.57	115.30
2	C	1160	ASP	C-N-CA	5.53	135.54	121.70
2	C	712	SER	C-N-CA	-5.53	110.69	122.30
2	C	818	VAL	CG1-CB-CG2	-5.53	102.06	110.90
1	H	29	GLU	C-N-CD	-5.52	108.45	120.60
5	L	463	LEU	CA-CB-CG	-5.52	102.61	115.30
1	G	142	MET	CB-CG-SD	5.51	128.92	112.40
3	D	38	VAL	CA-CB-CG2	-5.50	102.64	110.90
3	D	275	ARG	NE-CZ-NH2	5.50	123.05	120.30
3	D	107	LEU	CB-CG-CD1	-5.50	101.65	111.00
2	C	511	LEU	CA-CB-CG	-5.50	102.65	115.30
2	C	1287	LEU	CA-CB-CG	-5.48	102.70	115.30
3	D	239	LEU	CB-CG-CD2	-5.48	101.69	111.00
3	J	107	LEU	CA-CB-CG	5.47	127.87	115.30
3	D	238	ILE	CA-CB-CG1	-5.46	100.62	111.00
3	D	298	MET	CA-CB-CG	-5.46	104.01	113.30
5	F	557	LYS	CD-CE-NZ	5.45	124.24	111.70
2	C	791	LEU	CB-CG-CD1	-5.45	101.73	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	C	1160	ASP	CB-CG-OD1	5.45	123.21	118.30
5	L	602	SER	N-CA-C	-5.45	96.28	111.00
2	C	1264	GLN	N-CA-C	-5.42	96.38	111.00
3	J	329	ASP	CB-CG-OD1	5.41	123.17	118.30
3	D	241	VAL	CB-CA-C	-5.40	101.14	111.40
1	A	262	LEU	CA-CB-CG	-5.38	102.92	115.30
3	J	1234	VAL	CG1-CB-CG2	-5.38	102.29	110.90
2	C	96	LEU	CB-CG-CD2	-5.37	101.87	111.00
3	J	299	LEU	CB-CG-CD1	-5.37	101.88	111.00
2	I	1259	LEU	CA-CB-CG	-5.36	102.97	115.30
1	A	143	ARG	CG-CD-NE	5.36	123.05	111.80
3	D	252	LEU	CB-CG-CD2	5.36	120.11	111.00
3	J	605	LEU	CB-CG-CD2	-5.35	101.91	111.00
2	C	1131	MET	CG-SD-CE	5.34	108.74	100.20
2	C	1119	MET	CB-CG-SD	-5.33	96.41	112.40
3	D	838	ARG	CB-CG-CD	5.30	125.39	111.60
3	D	352	ARG	CG-CD-NE	-5.30	100.67	111.80
3	D	485	MET	CG-SD-CE	5.28	108.65	100.20
1	H	58	GLU	CB-CA-C	-5.28	99.85	110.40
3	J	385	LEU	CA-CB-CG	-5.27	103.18	115.30
2	I	1241	ASP	N-CA-C	-5.27	96.78	111.00
1	A	307	LEU	CA-CB-CG	-5.26	103.20	115.30
3	D	370	LYS	CA-CB-CG	5.26	124.96	113.40
3	D	1337	VAL	CA-CB-CG2	-5.26	103.01	110.90
5	F	416	VAL	CA-CB-CG2	-5.25	103.03	110.90
3	D	311	ARG	NE-CZ-NH2	-5.24	117.68	120.30
3	J	127	LEU	CA-CB-CG	-5.24	103.25	115.30
3	D	42	GLU	CA-CB-CG	5.24	124.92	113.40
1	H	95	LYS	CA-CB-CG	5.24	124.92	113.40
2	C	1059	ARG	N-CA-CB	5.22	120.00	110.60
2	C	1170	MET	CA-CB-CG	-5.22	104.43	113.30
1	A	323	PRO	C-N-CA	5.22	134.74	121.70
2	I	1160	ASP	C-N-CA	5.22	134.74	121.70
1	A	74	VAL	CG1-CB-CG2	-5.21	102.56	110.90
2	C	865	LEU	CA-CB-CG	-5.21	103.31	115.30
3	J	1328	THR	CA-CB-CG2	-5.21	105.11	112.40
2	C	1273	MET	CG-SD-CE	-5.20	91.88	100.20
3	J	796	LEU	CA-CB-CG	-5.20	103.35	115.30
2	C	482	GLY	N-CA-C	5.19	126.08	113.10
3	J	829	GLY	N-CA-C	-5.19	100.12	113.10
3	J	154	LEU	CB-CG-CD1	-5.17	102.21	111.00
2	I	1054	LEU	CB-CG-CD1	-5.16	102.23	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	D	907	HIS	N-CA-CB	-5.16	101.31	110.60
5	F	551	LEU	CA-CB-CG	-5.15	103.46	115.30
3	J	265	LEU	CB-CG-CD2	-5.14	102.26	111.00
3	D	343	LEU	CA-CB-CG	-5.12	103.52	115.30
3	D	767	LEU	CB-CG-CD1	-5.12	102.30	111.00
1	A	82	LEU	CB-CG-CD2	-5.11	102.31	111.00
1	A	131	CYS	CA-CB-SG	-5.10	104.82	114.00
3	D	1356	LEU	CA-CB-CG	-5.09	103.58	115.30
3	D	425	ARG	NE-CZ-NH1	-5.07	117.76	120.30
2	C	1332	SER	CB-CA-C	-5.07	100.47	110.10
3	J	271	ARG	CB-CG-CD	-5.07	98.43	111.60
3	D	156	ARG	NE-CZ-NH2	-5.07	117.77	120.30
5	L	430	TYR	CB-CG-CD2	-5.06	117.96	121.00
1	A	45	ARG	NE-CZ-NH2	-5.06	117.77	120.30
2	C	813	GLU	CA-CB-CG	-5.06	102.28	113.40
5	L	430	TYR	CB-CG-CD1	5.06	124.03	121.00
2	C	451	ARG	CG-CD-NE	-5.05	101.19	111.80
2	C	177	ILE	CG1-CB-CG2	-5.03	100.34	111.40
1	A	48	LEU	CB-CG-CD2	-5.02	102.46	111.00
1	B	31	LEU	CB-CG-CD1	-5.02	102.46	111.00
3	D	278	ARG	NE-CZ-NH1	-5.02	117.79	120.30
5	F	386	LEU	CA-CB-CG	5.02	126.84	115.30
3	D	1246	VAL	CA-CB-CG2	-5.01	103.39	110.90
3	D	909	ILE	CG1-CB-CG2	-5.00	100.39	111.40

There are no chirality outliers.

All (39) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	321	TRP	Peptide
1	A	49	SER	Mainchain
2	C	1077	SER	Mainchain
2	C	109	ALA	Peptide
2	C	1107	MET	Mainchain
2	C	1164	PHE	Mainchain
2	C	1332	SER	Mainchain
2	C	236	LYS	Peptide
2	C	473	ARG	Mainchain
2	C	560	PRO	Mainchain
2	C	573	ASN	Mainchain
2	C	683	ALA	Mainchain
2	C	686	GLN	Mainchain

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Mol	Chain	Res	Type	Group
3	D	113	HIS	Mainchain
3	D	1184	ASP	Peptide
3	D	1296	GLY	Peptide
3	D	1310	THR	Mainchain
3	D	181	GLY	Mainchain
3	D	308	ASP	Mainchain
3	D	367	GLY	Mainchain
3	D	379	PRO	Mainchain
3	D	425	ARG	Mainchain
3	D	483	LEU	Mainchain
3	D	914	ALA	Mainchain
3	D	921	GLN	Mainchain
5	F	601	PRO	Peptide
1	G	171	LEU	Peptide
2	I	109	ALA	Peptide
2	I	236	LYS	Peptide
3	J	102	MET	Mainchain
3	J	1184	ASP	Peptide
3	J	1296	GLY	Peptide
3	J	1305	ASP	Mainchain
3	J	143	SER	Mainchain
3	J	186	GLN	Mainchain
3	J	248	ASP	Mainchain
3	J	299	LEU	Mainchain
3	J	475	GLU	Mainchain
5	L	601	PRO	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	2403	0	2453	197	0
1	B	1672	0	1693	112	0
1	G	1730	0	1756	145	0
1	H	1667	0	1689	123	1
2	C	10572	0	10584	657	3
2	I	10568	0	10578	602	0
3	D	9107	0	9308	612	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	J	9029	0	9225	587	0
4	E	691	0	695	22	0
4	K	627	0	634	26	0
5	F	3806	0	3873	199	2
5	L	3821	0	3884	190	0
6	D	1	0	0	0	0
6	J	1	0	0	0	0
7	D	2	0	0	0	0
7	J	2	0	0	0	0
All	All	55699	0	56372	3190	3

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 28.

All (3190) 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:A:27:THR:O	1:A:28:LEU:HD12	1.10	1.23
2:I:27:LEU:O	2:I:528:ARG:NH1	1.78	1.17
1:A:27:THR:O	1:A:28:LEU:CD1	1.93	1.17
3:D:1280:VAL:HG11	3:D:1304:ARG:HH21	1.16	1.08
3:D:660:GLU:HB3	3:D:685:ILE:HD12	1.36	1.08
2:C:985:GLU:HB3	2:C:988:LYS:HB2	1.36	1.07
1:A:12:ARG:H	1:A:30:PRO:CG	1.67	1.06
2:C:758:ARG:HH22	2:C:761:GLN:HG3	1.22	1.04
1:A:45:ARG:HG2	1:B:38:THR:HB	1.40	1.04
2:C:1196:LYS:HD2	2:C:1206:THR:HG23	1.40	1.04
2:C:324:LYS:O	2:C:327:GLN:NE2	1.89	1.03
1:A:27:THR:C	1:A:28:LEU:HD12	1.78	1.02
2:C:1142:ARG:HD3	2:C:1161:LEU:HD11	1.43	1.01
2:C:696:ASP:HB2	2:C:798:GLN:HG2	1.42	1.00
1:A:12:ARG:H	1:A:30:PRO:HG3	1.22	1.00
3:J:1280:VAL:HG11	3:J:1304:ARG:HH21	1.23	0.99
2:I:560:PRO:O	3:J:780:ARG:NH2	1.96	0.99
2:I:1312:ASN:HD21	2:I:1314:GLN:HE21	1.00	0.98
5:F:490:PRO:HG2	5:F:493:LYS:HE3	1.46	0.97
2:I:821:ARG:HH21	2:I:1082:ILE:HG21	1.27	0.96
2:C:131:THR:HG22	2:C:135:THR:H	1.27	0.96
3:J:418:GLU:HG3	4:K:45:LYS:H	1.30	0.95
2:C:69:GLN:HE21	2:C:101:ARG:HD2	1.28	0.95
3:D:56:LEU:HD12	3:D:56:LEU:H	1.29	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:142:GLU:HB2	2:C:760:ASN:HD21	1.30	0.94
1:G:190:ALA:HB2	1:G:200:LYS:HB2	1.46	0.94
3:D:1280:VAL:HG21	3:D:1304:ARG:HE	1.30	0.93
3:J:797:THR:HG22	3:J:924:GLY:HA3	1.49	0.93
2:I:657:THR:HG21	2:I:1188:ASP:HB2	1.51	0.92
2:I:886:LYS:HE3	2:I:916:SER:HB3	1.52	0.92
3:J:268:LEU:HD13	3:J:306:LEU:HA	1.52	0.92
1:A:27:THR:C	1:A:28:LEU:CD1	2.36	0.92
3:D:797:THR:HG22	3:D:924:GLY:HA3	1.53	0.91
2:C:10:ARG:HD3	2:C:1181:PRO:HG2	1.49	0.91
2:I:646:SER:HB3	2:I:649:GLN:HG3	1.51	0.91
2:I:890:LYS:NZ	2:I:891:GLY:O	2.02	0.91
1:A:11:PRO:HA	1:A:30:PRO:CG	2.01	0.90
1:A:12:ARG:N	1:A:30:PRO:HG3	1.86	0.90
3:J:1368:ASP:OD1	3:J:1371:ARG:NH2	2.04	0.90
3:D:1293:GLU:HG2	3:J:1227:HIS:HB2	1.51	0.90
2:C:120:GLN:HG3	2:C:121:GLU:HG3	1.51	0.90
2:C:221:LEU:HD11	2:C:314:ASN:HB2	1.54	0.90
5:F:278:ASP:OD1	5:F:281:ARG:NH1	2.04	0.90
2:C:745:GLU:HG3	2:C:1017:GLN:HB3	1.53	0.89
1:A:11:PRO:HA	1:A:30:PRO:HB2	1.54	0.89
1:A:11:PRO:CA	1:A:30:PRO:HG2	2.03	0.89
3:J:650:LYS:HE2	3:J:654:ILE:HD11	1.54	0.89
3:D:42:GLU:OE2	5:F:451:ARG:NH2	2.05	0.89
2:I:18:ARG:NH1	2:I:621:SER:O	2.05	0.89
2:I:523:GLU:HG2	2:I:527:LYS:HE3	1.55	0.88
2:I:202:ARG:HD3	2:I:369:MET:HG2	1.54	0.88
3:D:1140:ARG:HH21	3:D:1236:GLU:HG2	1.37	0.88
3:D:1291:GLU:OE1	3:J:1302:TYR:OH	1.91	0.88
1:A:16:ILE:HG23	1:A:26:VAL:HG12	1.55	0.87
2:C:930:ASP:OD2	2:C:931:VAL:N	2.08	0.86
3:J:660:GLU:HB3	3:J:685:ILE:HD12	1.57	0.86
2:C:1297:ASP:OD1	2:C:1300:GLY:N	2.08	0.86
2:C:758:ARG:NH2	2:C:761:GLN:HG3	1.91	0.86
1:G:231:PHE:HD1	1:H:218:ARG:HG2	1.40	0.86
1:A:45:ARG:HH22	2:C:1216:ARG:HA	1.40	0.85
5:L:132:CYS:SG	5:L:257:LYS:NZ	2.48	0.85
5:L:492:ASP:HB2	5:L:495:ARG:HH12	1.41	0.85
1:H:101:THR:HG22	1:H:116:THR:HB	1.58	0.85
3:D:1341:ARG:NH1	3:D:1343:GLU:OE2	2.09	0.85
3:D:817:HIS:CE1	3:D:860:ARG:HE	1.93	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:591:TYR:OH	2:C:637:ARG:NH2	2.10	0.85
2:I:183:TRP:HB2	2:I:199:ASP:HA	1.59	0.85
5:L:244:THR:O	5:L:247:GLU:HG2	1.77	0.85
2:I:1307:ASN:HB3	2:I:1312:ASN:O	1.75	0.85
1:A:11:PRO:HA	1:A:30:PRO:CB	2.07	0.84
3:J:799:ARG:NH1	3:J:1146:GLU:OE1	2.09	0.84
2:C:673:HIS:HB3	2:C:1109:ILE:HG22	1.58	0.84
1:B:16:ILE:HG23	1:B:26:VAL:HG22	1.57	0.84
2:I:1116:HIS:HE1	3:J:641:ILE:H	1.26	0.83
2:I:673:HIS:HB3	2:I:1109:ILE:HG22	1.59	0.83
2:I:1287:LEU:HD22	3:J:1357:ILE:HD11	1.61	0.83
2:C:646:SER:HB3	2:C:649:GLN:HG3	1.58	0.83
3:D:11:GLN:HG2	3:D:15:GLU:HG3	1.60	0.83
3:D:1203:ARG:HH22	3:D:1205:GLU:HG2	1.40	0.83
2:I:344:GLY:O	2:I:346:TYR:N	2.10	0.83
1:A:12:ARG:N	1:A:30:PRO:CG	2.40	0.83
1:B:48:LEU:HD21	3:D:535:ARG:HG3	1.61	0.83
3:J:1140:ARG:HH21	3:J:1236:GLU:HG2	1.43	0.83
1:A:190:ALA:HB2	1:A:200:LYS:HB2	1.60	0.82
2:I:478:ARG:HH12	2:I:482:GLY:HA2	1.42	0.82
2:I:452:ARG:NH1	2:I:584:TYR:O	2.12	0.82
2:C:1149:TYR:HD1	2:C:1159:VAL:HG11	1.44	0.82
3:D:75:TYR:OH	3:D:86:GLU:OE1	1.95	0.82
1:A:7:GLU:O	1:B:150:ARG:NH2	2.12	0.82
1:B:41:ASN:OD1	1:B:44:ARG:NH1	2.10	0.82
2:C:302:ILE:HG22	2:C:309:LEU:HA	1.60	0.82
5:F:121:LYS:NZ	5:F:421:TYR:OH	2.10	0.82
2:I:930:ASP:OD2	2:I:931:VAL:N	2.12	0.82
1:A:29:GLU:O	1:A:31:LEU:N	2.13	0.81
5:F:470:MET:SD	5:F:486:ARG:NH1	2.53	0.81
3:D:557:LYS:HA	3:D:563:LEU:HA	1.62	0.81
3:J:1203:ARG:HH12	3:J:1205:GLU:HG2	1.45	0.81
5:L:577:GLY:HA3	5:L:583:THR:HG23	1.63	0.81
3:J:1280:VAL:HG11	3:J:1304:ARG:NH2	1.95	0.81
2:I:696:ASP:HB2	2:I:798:GLN:HG2	1.62	0.81
3:D:930:LEU:HD22	3:D:1244:GLN:HG3	1.63	0.81
5:L:231:THR:HG23	5:L:249:ILE:HG12	1.63	0.81
3:D:128:LEU:HA	3:D:192:MET:HE1	1.61	0.80
3:J:872:LEU:HD22	3:J:877:VAL:HG11	1.62	0.80
3:J:1171:GLY:HA2	3:J:1193:TRP:HZ3	1.44	0.80
3:J:514:THR:OG1	3:J:594:GLN:O	1.98	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:41:ASN:ND2	2:I:1216:ARG:O	2.15	0.80
3:D:1368:ASP:OD1	3:D:1371:ARG:NH2	2.15	0.80
3:D:80:HIS:HB3	3:D:83:VAL:HG11	1.62	0.80
2:I:1312:ASN:HD21	2:I:1314:GLN:NE2	1.79	0.80
2:I:757:THR:HG23	2:I:765:ILE:HG23	1.64	0.80
3:J:1169:THR:HG23	3:J:1192:LYS:HD3	1.64	0.80
1:A:11:PRO:HA	1:A:30:PRO:HG2	1.59	0.79
1:A:89:ALA:H	1:A:125:LYS:HD3	1.47	0.79
1:A:228:LEU:HD22	1:B:221:ALA:HB1	1.64	0.79
3:D:327:LEU:HA	3:D:330:MET:HG3	1.62	0.79
2:I:761:GLN:HG2	2:I:762:ASN:OD1	1.82	0.79
2:I:860:ALA:O	2:I:863:SER:OG	2.01	0.79
1:G:12:ARG:HD2	1:H:230:ALA:HB1	1.62	0.79
2:C:721:GLY:N	2:C:740:GLU:OE1	2.13	0.79
3:D:515:ARG:NH2	3:D:717:VAL:O	2.16	0.79
4:K:25:ARG:NH1	4:K:65:ASP:OD1	2.15	0.79
1:B:16:ILE:HG12	1:B:26:VAL:HG13	1.65	0.79
2:C:1212:LEU:HD22	2:C:1225:VAL:HG21	1.65	0.79
2:I:591:TYR:OH	2:I:637:ARG:NH2	2.15	0.79
3:D:1227:HIS:CD2	3:J:1293:GLU:HG2	2.16	0.79
3:J:810:THR:HG21	3:J:893:GLY:HA3	1.65	0.79
2:I:949:GLU:HG2	2:I:1036:ILE:HG22	1.65	0.78
1:G:41:ASN:HD22	1:H:41:ASN:HD22	1.32	0.78
1:H:23:HIS:ND1	1:H:206:GLU:HG2	1.97	0.78
5:F:582:VAL:HG12	5:F:586:ARG:HG2	1.65	0.78
2:I:1114:GLU:OE1	2:I:1230:MET:HA	1.82	0.78
5:F:483:LEU:HD12	5:F:483:LEU:H	1.46	0.78
2:I:30:ILE:HD12	2:I:30:ILE:H	1.48	0.78
1:A:14:VAL:HG22	1:A:15:ASP:H	1.48	0.78
1:A:7:GLU:HG3	1:B:150:ARG:HE	1.49	0.78
2:I:1073:LYS:HE3	3:J:462:ASP:HB2	1.64	0.78
2:C:1149:TYR:CD1	2:C:1159:VAL:HG11	2.18	0.78
3:J:518:VAL:HG11	3:J:707:ILE:HD13	1.64	0.78
1:B:76:GLU:OE2	1:B:132:HIS:N	2.13	0.78
2:C:1240:ASP:HB3	3:D:445:LYS:HD2	1.66	0.78
1:A:60:GLU:CD	1:A:143:ARG:HH21	1.88	0.78
2:C:133:ASN:O	2:C:527:LYS:NZ	2.17	0.78
1:H:196:THR:HG23	3:J:443:GLU:HG3	1.64	0.78
3:D:1140:ARG:NH2	3:D:1236:GLU:HG2	1.99	0.77
1:H:59:VAL:O	1:H:171:LEU:N	2.16	0.77
2:I:703:GLY:N	2:I:705:GLU:OE2	2.16	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:23:HIS:HB2	1:A:205:MET:O	1.85	0.77
3:D:587:LEU:HD23	3:D:591:ILE:HG21	1.66	0.77
5:F:492:ASP:HB2	5:F:495:ARG:HH12	1.48	0.77
3:J:518:VAL:O	3:J:547:ARG:NH1	2.18	0.77
3:J:647:PRO:HG3	3:J:697:MET:HB3	1.66	0.77
5:F:573:LEU:H	5:F:573:LEU:HD23	1.49	0.77
2:I:1196:LYS:HD2	2:I:1206:THR:HG23	1.67	0.77
5:L:585:GLU:OE2	5:L:588:ARG:NH1	2.18	0.77
2:C:131:THR:HG23	2:C:133:ASN:H	1.50	0.76
3:D:418:GLU:HG3	4:E:45:LYS:H	1.50	0.76
1:A:187:VAL:HG12	1:A:201:LEU:HD13	1.68	0.76
1:A:45:ARG:NH2	2:C:1216:ARG:HA	1.99	0.76
3:D:83:VAL:HG13	3:D:92:VAL:HG13	1.65	0.76
3:J:905:ARG:HH11	4:K:16:ARG:HD2	1.51	0.76
3:D:1280:VAL:HG11	3:D:1304:ARG:NH2	1.99	0.76
3:D:109:SER:HB2	3:D:296:LYS:HE2	1.68	0.76
2:I:1072:ASN:N	2:I:1072:ASN:OD1	2.14	0.76
3:J:1263:LYS:HE2	3:J:1279:GLN:HE21	1.50	0.76
2:C:705:GLU:HB2	2:C:794:LEU:H	1.50	0.76
3:D:1160:SER:OG	3:D:1203:ARG:NH1	2.18	0.76
2:I:637:ARG:HA	2:I:642:SER:HA	1.66	0.76
2:C:1299:ASN:HD22	2:C:1303:LYS:HE2	1.49	0.76
2:C:4:SER:OG	2:C:5:TYR:N	2.16	0.76
3:J:1252:HIS:O	3:J:1255:VAL:HG13	1.85	0.76
1:B:6:THR:N	1:B:7:GLU:OE2	2.17	0.76
3:D:1289:ASN:OD1	3:D:1290:ARG:NH1	2.19	0.76
1:G:161:SER:O	1:G:163:GLU:N	2.18	0.76
1:A:118:ASP:HB3	1:A:121:VAL:HG23	1.68	0.75
2:I:1272:GLU:HB2	3:J:342:LEU:O	1.87	0.75
2:C:759:SER:OG	2:C:763:THR:N	2.18	0.75
1:H:73:GLY:HA2	1:H:134:THR:HG22	1.67	0.75
3:J:1368:ASP:HA	3:J:1371:ARG:HH12	1.49	0.75
2:I:242:VAL:HB	2:I:245:ARG:HD2	1.68	0.75
3:J:80:HIS:HB3	3:J:83:VAL:HG11	1.69	0.75
5:L:572:THR:HG23	5:L:575:GLU:HB2	1.67	0.75
2:C:69:GLN:NE2	2:C:101:ARG:HD2	2.00	0.75
2:C:142:GLU:HB2	2:C:760:ASN:ND2	2.02	0.75
2:C:42:ASP:OD2	2:C:44:GLU:HG2	1.86	0.75
3:J:426:ALA:HB3	3:J:427:PRO:HD3	1.69	0.75
5:L:395:THR:OG1	5:L:396:ASN:N	2.16	0.75
2:C:94:ALA:HB2	2:C:129:LEU:HD11	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:42:ASP:OD2	2:C:44:GLU:O	2.05	0.75
3:D:97:VAL:HG12	3:D:101:ARG:HG3	1.69	0.75
3:D:30:ILE:HG23	3:D:243:PRO:HG3	1.69	0.75
2:I:1117:LEU:HD21	2:I:1182:ILE:HD12	1.68	0.75
1:A:61:ILE:HG23	1:A:142:MET:HB3	1.69	0.75
2:C:1164:PHE:N	2:C:1168:GLU:OE1	2.18	0.75
3:J:140:TYR:OH	3:J:312:ARG:NH2	2.20	0.75
2:C:149:LEU:HD12	2:C:452:ARG:O	1.86	0.74
2:C:16:GLY:O	2:C:1156:ARG:HG2	1.87	0.74
3:J:523:GLU:OE2	3:J:547:ARG:NH1	2.18	0.74
3:D:798:ARG:NH1	3:D:802:ASP:OD2	2.20	0.74
2:I:929:ILE:HD13	2:I:1055:ALA:HB2	1.69	0.74
2:I:1184:THR:HG23	2:I:1189:GLY:HA3	1.68	0.74
2:I:292:ILE:HB	2:I:322:LEU:HD11	1.68	0.74
2:C:511:LEU:HD12	2:C:511:LEU:N	2.02	0.74
2:C:759:SER:O	2:C:761:GLN:N	2.19	0.74
3:D:1280:VAL:HG21	3:D:1304:ARG:NE	2.01	0.74
2:C:615:VAL:HG13	2:C:651:ASP:H	1.51	0.74
3:D:888:CYS:SG	3:D:889:ASP:N	2.61	0.74
2:I:1302:THR:HG22	5:L:531:PRO:HB3	1.70	0.74
3:J:362:ARG:H	3:J:365:GLN:HE21	1.33	0.74
2:C:1114:GLU:OE1	2:C:1230:MET:HA	1.88	0.74
3:D:317:THR:HG23	3:D:320:ASN:HB3	1.68	0.74
1:G:9:LEU:O	1:H:227:GLN:NE2	2.21	0.74
2:C:142:GLU:CB	2:C:760:ASN:HD21	1.99	0.74
2:C:878:THR:OG1	2:C:879:GLY:N	2.19	0.74
3:D:363:LEU:HA	3:D:450:HIS:CD2	2.23	0.74
3:D:98:ARG:HB3	3:D:248:ASP:OD2	1.88	0.74
1:A:12:ARG:H	1:A:30:PRO:HG2	1.53	0.74
3:D:45:ASN:HB3	3:D:48:THR:O	1.89	0.73
2:I:1101:LEU:HD12	3:J:505:ASP:OD2	1.87	0.73
3:J:1159:ILE:HA	3:J:1206:ARG:HB3	1.70	0.73
5:L:343:LYS:HD2	5:L:343:LYS:H	1.52	0.73
1:B:149:GLY:HA3	1:B:177:TYR:CD2	2.23	0.73
2:C:86:GLN:HA	2:C:140:GLY:HA2	1.69	0.73
2:C:839:VAL:HG12	2:C:1049:ILE:HG12	1.69	0.73
2:C:1289:GLU:OE2	3:D:473:THR:HG22	1.88	0.73
5:L:305:LEU:HB3	5:L:315:TRP:HB3	1.70	0.73
1:A:29:GLU:HB3	1:A:30:PRO:HD3	1.69	0.73
3:D:847:ASP:HA	3:D:860:ARG:H	1.53	0.73
1:G:194:GLN:O	1:G:195:ARG:HG2	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:148:GLN:NE2	2:I:535:PRO:O	2.18	0.73
1:H:50:SER:HA	1:H:150:ARG:O	1.88	0.73
1:A:166:ARG:O	1:A:168:ILE:N	2.22	0.73
2:C:525:THR:HG21	2:C:687:ARG:HD2	1.70	0.73
2:I:207:THR:HG21	2:I:351:LEU:HG	1.70	0.73
2:I:724:VAL:HA	2:I:734:ILE:HD13	1.71	0.73
2:I:758:ARG:HH22	2:I:761:GLN:HG3	1.54	0.73
1:A:87:GLY:O	1:A:125:LYS:NZ	2.21	0.73
2:C:131:THR:CG2	2:C:135:THR:H	2.02	0.73
3:D:1183:SER:OG	3:J:206:ASN:ND2	2.22	0.72
3:J:152:THR:OG1	3:J:153:ASN:N	2.22	0.72
3:J:403:ARG:HB3	3:J:405:GLU:HG3	1.71	0.72
5:L:97:PRO:HA	5:L:100:MET:HG3	1.70	0.72
1:A:32:GLU:HA	1:A:198:LEU:HD22	1.71	0.72
3:D:314:ARG:NH2	3:D:323:PRO:HG3	2.04	0.72
2:C:812:PHE:CE2	3:D:451:PRO:HB3	2.24	0.72
2:I:819:SER:HB2	2:I:1085:MET:SD	2.29	0.72
3:J:435:GLN:HB2	3:J:457:TYR:OH	1.89	0.72
3:D:399:LYS:NZ	5:F:611:LEU:O	2.23	0.72
2:C:242:VAL:HB	2:C:245:ARG:HD2	1.70	0.72
2:C:30:ILE:HD12	2:C:30:ILE:H	1.53	0.72
2:I:125:GLY:HA2	2:I:499:SER:HB2	1.71	0.72
2:I:942:ASP:OD2	2:I:1048:LYS:NZ	2.23	0.72
1:B:82:LEU:HA	1:B:85:LEU:HD12	1.71	0.72
3:D:73:GLY:O	3:D:76:LYS:NZ	2.17	0.72
2:I:1312:ASN:ND2	2:I:1314:GLN:HE21	1.82	0.72
1:A:36:GLY:HA3	1:A:187:VAL:HG11	1.71	0.72
3:D:72:CYS:HB3	3:D:88:CYS:SG	2.29	0.72
5:F:395:THR:OG1	5:F:396:ASN:N	2.23	0.72
2:I:1308:ILE:HG21	3:J:379:PRO:HB2	1.72	0.72
3:J:576:ARG:NH1	3:J:593:ASN:O	2.21	0.72
1:A:261:GLU:CD	2:C:859:GLU:H	1.93	0.72
3:D:598:LYS:O	3:D:601:ILE:HG22	1.89	0.72
3:J:905:ARG:NH1	3:J:910:ASN:HD21	1.88	0.72
5:L:512:GLY:O	5:L:514:ASP:N	2.23	0.72
1:H:89:ALA:HB3	1:H:124:VAL:HG12	1.70	0.72
1:G:79:LEU:HD21	2:I:756:TYR:OH	1.89	0.72
5:L:387:VAL:HG22	5:L:435:ILE:HD13	1.71	0.72
3:J:810:THR:CG2	3:J:893:GLY:HA3	2.20	0.71
5:L:386:LEU:O	5:L:389:SER:OG	2.05	0.71
2:I:1108:ASN:OD1	2:I:1111:GLN:NE2	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1131:MET:HE1	2:C:1141:LEU:HA	1.72	0.71
2:C:1287:LEU:HD22	3:D:1357:ILE:HD11	1.72	0.71
2:C:617:ALA:HA	2:C:636:CYS:SG	2.29	0.71
2:I:836:LEU:HD13	2:I:1054:LEU:HD13	1.70	0.71
3:J:1309:ILE:HG13	3:J:1310:THR:N	2.05	0.71
2:C:14:ASP:N	2:C:1157:GLN:OE1	2.23	0.71
2:C:1202:GLY:O	2:C:1203:ASP:HB2	1.90	0.71
3:J:650:LYS:NZ	3:J:765:GLU:OE2	2.24	0.71
2:C:696:ASP:HB2	2:C:798:GLN:CG	2.19	0.71
2:C:90:VAL:HG12	2:C:91:THR:H	1.55	0.71
2:I:1268:GLN:HE22	3:J:352:ARG:NH1	1.88	0.71
3:J:56:LEU:H	3:J:56:LEU:HD12	1.56	0.71
3:D:368:LEU:HD22	3:D:373:ALA:HB2	1.73	0.71
2:I:660:VAL:HG13	2:I:661:VAL:HG13	1.71	0.71
2:C:1284:ALA:HB1	3:D:1356:LEU:HD22	1.70	0.71
2:I:1185:PRO:HB2	2:I:1188:ASP:HB3	1.71	0.71
3:J:706:VAL:HG12	3:J:715:LYS:HB3	1.72	0.71
1:A:83:LEU:HD23	2:C:694:ARG:HE	1.54	0.71
2:C:703:GLY:N	2:C:705:GLU:OE2	2.23	0.71
5:L:281:ARG:HG2	5:L:285:ARG:HD2	1.73	0.71
2:C:980:VAL:HA	2:C:984:VAL:HA	1.72	0.71
2:C:987:GLU:HG2	2:C:991:LYS:HE3	1.71	0.71
3:D:355:ILE:HG22	3:D:447:ILE:HB	1.72	0.71
3:D:35:PHE:HD1	3:D:101:ARG:HB3	1.55	0.71
2:C:1101:LEU:HD13	3:D:504:GLN:HB2	1.73	0.71
1:G:102:LEU:HD23	1:G:115:ILE:HG12	1.71	0.71
1:G:49:SER:OG	1:G:50:SER:N	2.23	0.71
2:I:578:TYR:HB3	2:I:590:PRO:HG2	1.71	0.70
5:L:601:PRO:HA	5:L:604:SER:HB2	1.74	0.70
1:A:13:LEU:H	1:A:13:LEU:HD23	1.56	0.70
2:C:700:VAL:HG13	2:C:1117:LEU:HD22	1.72	0.70
1:H:102:LEU:HB2	1:H:142:MET:H	1.56	0.70
2:I:1333:LEU:HD22	3:J:307:LEU:HD22	1.73	0.70
2:I:838:CYS:SG	2:I:886:LYS:HD3	2.31	0.70
3:J:798:ARG:NH1	3:J:802:ASP:OD2	2.23	0.70
5:L:561:MET:HA	5:L:567:MET:HE1	1.73	0.70
1:A:310:ARG:O	5:F:608:ARG:NH1	2.24	0.70
1:B:12:ARG:O	1:B:13:LEU:HG	1.91	0.70
3:D:1273:ASP:HB3	3:D:1276:GLU:HG3	1.73	0.70
1:G:66:HIS:CE1	2:I:874:GLY:HA2	2.26	0.70
1:A:29:GLU:HB3	1:A:30:PRO:CD	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1223:ARG:NH1	3:J:721:SER:OG	2.24	0.70
2:I:810:TYR:CD2	3:J:359:PRO:HG2	2.27	0.70
2:I:559:CYS:HB2	2:I:662:SER:HB3	1.74	0.70
2:C:942:ASP:OD2	2:C:1048:LYS:NZ	2.22	0.70
3:D:516:ASP:HA	3:D:545:HIS:HB2	1.74	0.70
5:F:601:PRO:HA	5:F:604:SER:HB2	1.72	0.70
3:J:1177:ILE:HD12	3:J:1186:TYR:HB3	1.74	0.70
3:J:1239:ASP:OD1	3:J:1242:ARG:NH2	2.25	0.70
1:A:172:LEU:HD12	1:A:172:LEU:H	1.55	0.70
3:J:557:LYS:HA	3:J:563:LEU:HA	1.73	0.70
5:L:412:LEU:HB2	5:L:435:ILE:HD11	1.73	0.70
3:D:902:ASP:OD1	3:D:903:LEU:N	2.25	0.70
5:F:277:MET:HG3	5:F:362:ASN:ND2	2.07	0.70
5:L:483:LEU:HD12	5:L:483:LEU:H	1.57	0.70
2:C:1151:LEU:HD11	2:C:1198:LEU:HD23	1.73	0.69
3:D:854:ALA:HB2	3:J:1372:ARG:HB2	1.74	0.69
5:F:600:HIS:CD2	5:F:601:PRO:HD2	2.26	0.69
5:F:97:PRO:HA	5:F:100:MET:HG3	1.73	0.69
2:I:521:LEU:HA	2:I:524:ILE:HG22	1.75	0.69
2:I:109:ALA:HB1	2:I:110:PRO:C	2.13	0.69
5:L:547:VAL:HG23	5:L:603:ARG:HH11	1.57	0.69
3:D:31:ARG:NH2	3:D:106:GLU:OE2	2.23	0.69
3:D:1167:LYS:HD3	3:D:1174:ARG:HD2	1.72	0.69
3:D:866:GLU:OE2	3:D:901:ARG:NH2	2.24	0.69
3:J:425:ARG:NH1	3:J:459:ALA:HA	2.07	0.69
3:J:210:SER:O	3:J:214:ARG:HG2	1.92	0.69
3:J:865:HIS:CE1	3:J:867:GLN:HB2	2.28	0.69
2:C:8:LYS:HE3	2:C:1171:ARG:CZ	2.23	0.69
3:D:1159:ILE:HA	3:D:1206:ARG:HB3	1.72	0.69
2:I:310:ILE:HG21	2:I:325:LEU:HB3	1.73	0.69
1:H:60:GLU:HG3	1:H:143:ARG:O	1.92	0.69
3:J:360:TYR:OH	3:J:448:GLN:OE1	2.05	0.69
3:J:202:ARG:NH2	3:J:225:GLU:OE1	2.25	0.69
3:J:848:VAL:HG23	3:J:858:VAL:HG13	1.74	0.69
3:D:248:ASP:O	3:D:251:PRO:HG3	1.92	0.69
3:D:708:ASN:HB3	3:D:712:GLN:O	1.92	0.69
3:J:1341:ARG:NH1	3:J:1343:GLU:OE2	2.26	0.69
2:C:453:ILE:HD12	2:C:587:LEU:HD21	1.73	0.69
3:D:1149:ARG:CZ	3:D:1153:PRO:HG2	2.22	0.69
2:C:582:ASN:HB3	2:C:586:PHE:H	1.57	0.69
1:G:218:ARG:HG3	1:H:231:PHE:O	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:491:LEU:HB2	3:D:904:ALA:HA	1.73	0.68
1:G:134:THR:HG23	1:G:135:ASP:H	1.56	0.68
1:G:92:VAL:O	1:G:148:ARG:NH2	2.25	0.68
2:I:26:TYR:CE2	2:I:28:LEU:HB2	2.28	0.68
1:A:31:LEU:HB2	1:A:199:ASP:O	1.94	0.68
1:B:98:VAL:HG11	1:B:121:VAL:HG22	1.74	0.68
3:D:293:ARG:NH1	5:F:104:GLU:OE2	2.27	0.68
3:D:674:THR:OG1	3:D:677:GLU:HB2	1.94	0.68
5:F:247:GLU:HA	5:F:250:LEU:HD12	1.74	0.68
2:C:578:TYR:HB3	2:C:590:PRO:HG2	1.76	0.68
2:C:618:GLN:HG3	2:C:619:ALA:N	2.05	0.68
3:J:1344:LEU:HB3	3:J:1350:ASN:ND2	2.08	0.68
5:L:101:TYR:O	5:L:104:GLU:N	2.26	0.68
5:L:281:ARG:O	5:L:285:ARG:HG3	1.93	0.68
2:C:656:SER:OG	2:C:657:THR:N	2.22	0.68
2:C:886:LYS:HE3	2:C:916:SER:HB3	1.75	0.68
3:D:74:LYS:HD2	3:D:87:LYS:HD3	1.75	0.68
3:D:817:HIS:CE1	3:D:860:ARG:NE	2.61	0.68
3:J:1137:GLY:O	3:J:1140:ARG:HB3	1.93	0.68
1:B:48:LEU:HD12	1:B:183:ILE:HD11	1.73	0.68
3:D:1266:ILE:HD12	3:D:1273:ASP:O	1.94	0.68
3:D:1295:ASN:CB	3:D:1298:VAL:HB	2.24	0.68
2:C:563:THR:OG1	2:C:564:PRO:HD2	1.93	0.68
1:H:61:ILE:HB	1:H:64:VAL:O	1.94	0.68
3:J:102:MET:HE2	3:J:246:PRO:HD3	1.76	0.68
3:J:362:ARG:H	3:J:365:GLN:NE2	1.91	0.68
3:J:98:ARG:HB3	3:J:248:ASP:OD2	1.94	0.68
2:C:74:ARG:HH12	2:C:121:GLU:CD	1.96	0.68
1:A:227:GLN:NE2	1:B:9:LEU:O	2.27	0.68
2:C:296:VAL:HB	2:C:336:LEU:HD12	1.75	0.68
3:D:709:ARG:O	3:D:711:GLY:N	2.27	0.68
5:F:306:PHE:HE1	5:F:315:TRP:CD2	2.11	0.68
1:G:79:LEU:HD23	1:G:79:LEU:H	1.59	0.68
2:I:890:LYS:HE2	2:I:891:GLY:H	1.58	0.68
1:B:29:GLU:HB3	1:B:200:LYS:HG3	1.74	0.68
2:C:1211:ARG:HD3	2:C:1213:TYR:OH	1.94	0.68
2:C:27:LEU:O	2:C:528:ARG:NH1	2.27	0.68
2:C:363:LEU:HB3	2:C:381:ALA:HB1	1.74	0.68
3:D:824:PRO:HD3	3:D:835:LEU:HB2	1.74	0.68
3:J:817:HIS:CE1	3:J:860:ARG:HE	2.12	0.68
4:K:70:GLN:NE2	4:K:74:GLU:OE2	2.16	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:724:VAL:HG23	2:I:775:GLU:O	1.94	0.67
3:J:147:ILE:HG22	3:J:188:LEU:HG	1.77	0.67
3:D:1290:ARG:HG2	3:D:1298:VAL:HG12	1.75	0.67
2:I:10:ARG:HD3	2:I:1181:PRO:HG2	1.76	0.67
3:J:847:ASP:N	3:J:847:ASP:OD1	2.23	0.67
1:A:155:ALA:HA	1:A:158:ARG:HG3	1.76	0.67
1:A:73:GLY:O	1:A:134:THR:HG22	1.95	0.67
1:A:7:GLU:OE1	1:B:150:ARG:NH2	2.28	0.67
3:D:262:THR:OG1	3:D:263:SER:N	2.24	0.67
1:G:45:ARG:HH22	1:H:37:HIS:HB3	1.59	0.67
2:I:517:GLN:NE2	2:I:687:ARG:O	2.26	0.67
3:J:1199:PHE:HB2	3:J:1202:GLU:HB2	1.75	0.67
1:A:45:ARG:HG2	1:B:38:THR:CB	2.21	0.67
3:J:773:PHE:O	3:J:776:THR:HB	1.95	0.67
3:J:75:TYR:CE2	3:J:83:VAL:HG21	2.28	0.67
2:C:268:ARG:HH21	2:C:270:THR:HG21	1.60	0.67
3:D:210:SER:O	3:D:214:ARG:HG2	1.95	0.67
2:I:478:ARG:NH1	2:I:482:GLY:HA2	2.10	0.67
2:I:607:SER:N	2:I:610:GLU:OE1	2.27	0.67
1:G:75:GLN:HA	2:I:729:ALA:N	2.09	0.67
2:I:1158:LYS:O	2:I:1159:VAL:HG13	1.94	0.67
3:J:1179:PRO:HD2	3:J:1184:ASP:HA	1.77	0.67
2:C:494:ASN:HD22	2:C:497:PRO:HD3	1.58	0.67
5:F:479:THR:HG23	5:F:481:GLU:H	1.58	0.67
2:C:520:PRO:HG3	2:C:714:VAL:HG21	1.77	0.67
2:C:1242:LYS:HD2	3:D:465:GLN:OE1	1.94	0.67
2:I:629:PHE:O	2:I:647:ARG:NH2	2.28	0.67
3:J:1263:LYS:CE	3:J:1279:GLN:HE21	2.08	0.67
3:J:700:ASN:O	3:J:704:GLU:HB2	1.95	0.67
1:G:22:THR:O	1:G:207:THR:N	2.27	0.67
1:H:67:GLU:O	1:H:78:ILE:HB	1.95	0.67
2:C:1238:LEU:HD12	2:C:1238:LEU:H	1.60	0.66
3:D:694:SER:OG	3:D:738:ARG:NE	2.28	0.66
2:I:818:VAL:O	2:I:1079:ILE:HD12	1.95	0.66
3:D:706:VAL:HG12	3:D:715:LYS:HB3	1.75	0.66
5:F:461:ASN:HB3	5:F:465:ARG:NH2	2.11	0.66
1:B:214:GLU:OE2	1:B:218:ARG:NH2	2.26	0.66
2:C:269:ILE:HA	2:C:273:HIS:ND1	2.10	0.66
2:I:55:SER:OG	2:I:56:VAL:N	2.28	0.66
2:C:838:CYS:SG	2:C:886:LYS:HD3	2.35	0.66
1:G:231:PHE:HA	1:H:218:ARG:NH1	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:1215:GLU:N	3:J:1215:GLU:OE2	2.28	0.66
2:I:1280:ALA:HB3	3:J:431:ARG:HB3	1.77	0.66
5:F:227:GLN:HE22	5:F:251:LYS:HZ1	1.42	0.66
1:G:52:PRO:HG2	1:G:219:ARG:HE	1.60	0.66
1:G:231:PHE:CD1	1:H:218:ARG:HG2	2.29	0.66
3:J:614:LEU:HD23	4:K:7:GLN:HB2	1.78	0.66
3:J:743:MET:HB2	3:J:759:ILE:O	1.96	0.66
3:J:902:ASP:OD1	3:J:903:LEU:N	2.29	0.66
3:D:1160:SER:HG	3:D:1203:ARG:HH12	1.44	0.66
3:D:56:LEU:N	3:D:56:LEU:HD12	2.04	0.66
5:F:139:GLU:HG2	5:F:351:THR:HA	1.77	0.66
2:C:1131:MET:HE1	2:C:1141:LEU:HD12	1.78	0.66
3:D:362:ARG:H	3:D:365:GLN:HE21	1.43	0.66
3:D:77:ARG:HB3	3:D:80:HIS:CE1	2.31	0.66
1:G:76:GLU:OE1	1:G:132:HIS:N	2.21	0.66
2:I:886:LYS:CE	2:I:916:SER:HB3	2.26	0.66
3:D:77:ARG:HB3	3:D:80:HIS:ND1	2.10	0.66
3:D:392:THR:HG21	5:F:606:VAL:HA	1.78	0.66
1:H:54:CYS:SG	1:H:148:ARG:HG2	2.36	0.66
5:L:139:GLU:HG2	5:L:351:THR:HA	1.77	0.66
5:L:461:ASN:O	5:L:465:ARG:HG2	1.95	0.66
1:B:64:VAL:HG21	1:B:69:SER:HB3	1.78	0.66
2:C:1072:ASN:OD1	2:C:1072:ASN:N	2.14	0.66
3:J:349:TYR:HE2	3:J:379:PRO:HG2	1.61	0.66
2:C:1131:MET:CE	2:C:1141:LEU:HD12	2.26	0.65
2:C:1158:LYS:O	2:C:1159:VAL:HG13	1.95	0.65
2:C:3:TYR:CE1	2:C:11:ILE:HD11	2.32	0.65
3:D:708:ASN:OD1	3:D:708:ASN:N	2.25	0.65
5:L:371:LYS:HA	5:L:374:ARG:NH1	2.12	0.65
2:C:816:ILE:O	2:C:1076:ILE:HD12	1.96	0.65
2:C:566:GLY:O	2:C:569:ILE:HG13	1.96	0.65
3:J:218:THR:HG21	3:J:1275:LEU:HD11	1.78	0.65
1:A:66:HIS:CE1	1:A:69:SER:HB3	2.31	0.65
2:C:1101:LEU:HD12	3:D:505:ASP:OD2	1.96	0.65
2:I:1246:ARG:NE	3:J:348:ASP:OD1	2.30	0.65
3:J:1358:PRO:HB3	3:J:1366:HIS:CG	2.31	0.65
1:A:45:ARG:NH2	2:C:1215:GLY:O	2.26	0.65
2:C:125:GLY:HA2	2:C:499:SER:HB2	1.78	0.65
1:G:12:ARG:HG2	1:G:13:LEU:HD23	1.76	0.65
2:I:14:ASP:N	2:I:1157:GLN:OE1	2.28	0.65
2:I:176:ILE:HD11	2:I:428:VAL:HG21	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:41:ASN:ND2	2:C:1216:ARG:O	2.29	0.65
1:G:12:ARG:HA	1:H:231:PHE:CZ	2.32	0.65
3:J:491:LEU:HD23	3:J:498:PRO:HA	1.77	0.65
2:C:292:ILE:HB	2:C:322:LEU:HD11	1.79	0.65
3:D:1372:ARG:O	3:D:1375:ALA:HB3	1.96	0.65
3:D:839:VAL:HG12	3:D:864:LEU:HD12	1.78	0.65
2:I:1134:GLN:HB3	2:I:1136:GLN:HG2	1.77	0.65
1:A:29:GLU:N	1:A:30:PRO:HD2	2.12	0.65
3:D:109:SER:CB	3:D:296:LYS:HE2	2.26	0.65
1:G:118:ASP:HB3	1:G:121:VAL:HG23	1.79	0.65
3:J:416:ILE:HG12	3:J:441:LEU:CD2	2.26	0.65
3:J:514:THR:HB	3:J:576:ARG:HG2	1.78	0.65
1:A:156:SER:HB2	2:C:1059:ARG:HH22	1.61	0.65
3:D:721:SER:HA	3:D:724:MET:HE2	1.78	0.65
3:D:827:GLU:HB3	3:D:832:LYS:HD2	1.78	0.65
1:G:102:LEU:HD22	1:G:103:ASN:H	1.60	0.65
3:J:1140:ARG:NE	3:J:1144:LEU:HD11	2.11	0.65
3:J:436:ALA:HB3	3:J:485:MET:HA	1.79	0.65
3:J:518:VAL:CG1	3:J:707:ILE:HD13	2.27	0.65
2:C:483:ASP:HB2	2:C:486:THR:CG2	2.26	0.65
3:D:24:LEU:HD23	3:D:232:ASN:ND2	2.11	0.65
3:D:298:MET:SD	5:F:402:LEU:HB3	2.37	0.65
2:I:755:LYS:O	2:I:757:THR:HG22	1.97	0.65
2:I:758:ARG:NH2	2:I:761:GLN:HG3	2.10	0.65
3:J:1289:ASN:OD1	3:J:1290:ARG:NH1	2.30	0.65
5:L:571:TYR:CD1	5:L:575:GLU:HG2	2.31	0.65
1:B:100:LEU:HD21	1:B:121:VAL:HG11	1.79	0.64
2:C:891:GLY:O	2:C:892:GLU:HG3	1.97	0.64
3:D:426:ALA:HB3	3:D:427:PRO:HD3	1.79	0.64
2:I:866:ASP:HA	2:I:872:TYR:OH	1.97	0.64
2:C:42:ASP:OD2	2:C:44:GLU:N	2.30	0.64
2:I:1196:LYS:HA	2:I:1199:LEU:HD12	1.79	0.64
3:J:1193:TRP:HB2	3:J:1194:ARG:NH1	2.12	0.64
3:J:290:ILE:HD12	3:J:290:ILE:H	1.62	0.64
3:J:901:ARG:HD2	3:J:906:GLY:O	1.97	0.64
5:F:490:PRO:HB2	5:F:493:LYS:HG3	1.79	0.64
2:I:57:PHE:HD1	2:I:58:PRO:HA	1.63	0.64
3:D:1179:PRO:HD2	3:D:1184:ASP:HA	1.79	0.64
3:J:258:GLY:HA3	5:L:499:LYS:HD3	1.79	0.64
2:I:525:THR:HG21	2:I:687:ARG:HD2	1.77	0.64
3:J:1159:ILE:HD12	3:J:1206:ARG:HD2	1.77	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:512:GLY:C	5:L:514:ASP:H	2.00	0.64
3:D:709:ARG:C	3:D:711:GLY:H	2.01	0.64
3:D:768:ASN:N	3:D:771:GLN:OE1	2.26	0.64
5:F:512:GLY:O	5:F:514:ASP:N	2.30	0.64
3:J:1140:ARG:HE	3:J:1144:LEU:HD11	1.61	0.64
1:B:81:ILE:O	1:B:85:LEU:HG	1.97	0.64
2:C:522:SER:O	2:C:525:THR:HG22	1.97	0.64
1:G:45:ARG:HG2	1:H:38:THR:HB	1.78	0.64
2:I:1065:LYS:HE2	3:J:462:ASP:O	1.98	0.64
2:I:890:LYS:HE2	2:I:891:GLY:N	2.13	0.64
3:J:1140:ARG:NH2	3:J:1236:GLU:HG2	2.12	0.64
3:J:544:LEU:O	3:J:574:VAL:HB	1.97	0.64
4:K:4:VAL:HG13	4:K:5:THR:HG23	1.78	0.64
5:L:573:LEU:HD23	5:L:573:LEU:H	1.63	0.64
1:A:263:THR:N	1:A:302:GLU:OE2	2.26	0.64
2:C:12:ARG:HH21	2:C:793:GLU:CD	2.01	0.64
2:C:1101:LEU:O	3:D:731:ARG:HD3	1.97	0.64
3:D:853:THR:HG21	3:J:1375:ALA:HB1	1.79	0.64
1:G:45:ARG:HD3	2:I:1083:GLU:HB3	1.79	0.64
5:L:134:VAL:HG22	5:L:273:MET:HE3	1.78	0.64
1:A:261:GLU:OE1	2:C:859:GLU:N	2.28	0.64
1:A:71:LYS:HB3	1:A:74:VAL:CG1	2.27	0.64
1:G:95:LYS:NZ	1:G:118:ASP:OD2	2.30	0.64
3:J:709:ARG:O	3:J:711:GLY:N	2.31	0.64
4:K:71:GLU:HA	4:K:74:GLU:HG3	1.80	0.64
2:C:1105:SER:HB2	3:D:731:ARG:HG2	1.80	0.64
3:J:367:GLY:HA3	3:J:448:GLN:HB2	1.79	0.64
5:L:457:ILE:HA	5:L:460:ILE:HD12	1.80	0.64
1:A:71:LYS:HB3	1:A:74:VAL:HG11	1.80	0.63
2:C:670:PHE:CE2	2:C:1113:LEU:HB3	2.33	0.63
2:C:14:ASP:HA	2:C:1183:ALA:HB3	1.80	0.63
3:D:317:THR:HG22	3:D:322:ARG:O	1.98	0.63
5:F:244:THR:O	5:F:247:GLU:HG2	1.99	0.63
2:I:1268:GLN:OE1	3:J:352:ARG:HG2	1.98	0.63
3:J:527:LEU:HD23	3:J:532:GLU:HG3	1.79	0.63
3:J:598:LYS:O	3:J:601:ILE:HG22	1.98	0.63
1:B:54:CYS:SG	1:B:148:ARG:HG2	2.38	0.63
2:C:156:PHE:CE2	2:C:158:ASP:HB2	2.34	0.63
2:I:759:SER:O	2:I:761:GLN:N	2.26	0.63
3:J:216:LYS:HA	3:J:219:LYS:HE3	1.80	0.63
1:B:205:MET:HE3	1:B:213:PRO:HB3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:179:PRO:HA	1:G:208:ASN:ND2	2.13	0.63
1:A:27:THR:C	1:A:28:LEU:HD13	2.18	0.63
5:F:582:VAL:CG1	5:F:586:ARG:HG2	2.27	0.63
2:I:1217:THR:OG1	2:I:1219:GLU:HG2	1.98	0.63
2:I:906:PHE:CE2	5:L:608:ARG:HG3	2.34	0.63
3:J:115:TRP:CZ2	3:J:1329:THR:HG23	2.34	0.63
2:C:582:ASN:HB3	2:C:586:PHE:N	2.12	0.63
2:C:720:ARG:HE	2:C:736:VAL:HG11	1.62	0.63
3:D:1143:ASP:OD1	3:D:1148:ARG:NH1	2.32	0.63
3:D:901:ARG:HA	3:D:908:ILE:HA	1.79	0.63
2:C:557:ARG:HH21	2:C:607:SER:C	2.01	0.63
2:C:974:ARG:HD2	2:C:1014:LEU:HD21	1.79	0.63
3:J:1326:GLN:OE1	3:J:1330:ARG:NH2	2.31	0.63
3:J:470:VAL:HG12	3:J:472:LEU:HD23	1.80	0.63
1:A:184:ALA:HB2	2:C:1091:GLY:HA3	1.79	0.63
3:D:892:PHE:H	3:D:1281:GLU:HG2	1.63	0.63
2:I:161:LYS:HA	2:I:170:VAL:HA	1.81	0.63
1:B:50:SER:HA	1:B:150:ARG:O	1.99	0.63
2:C:158:ASP:OD1	2:C:159:SER:N	2.32	0.63
2:I:987:GLU:HG2	2:I:991:LYS:HE3	1.81	0.63
5:L:164:GLY:O	5:L:260:ARG:HB2	1.99	0.63
2:C:1146:GLN:NE2	2:C:1150:ASP:OD2	2.33	0.62
2:C:1319:MET:HG3	2:C:1320:PRO:HD2	1.81	0.62
1:G:14:VAL:HG13	1:G:15:ASP:H	1.64	0.62
1:G:11:PRO:HB3	1:G:30:PRO:O	1.98	0.62
2:I:518:ASN:O	2:I:522:SER:HB3	1.99	0.62
1:G:118:ASP:HB3	1:G:121:VAL:CG2	2.29	0.62
2:C:1108:ASN:OD1	2:C:1111:GLN:NE2	2.33	0.62
2:C:4:SER:H	2:C:7:GLU:CD	2.01	0.62
3:D:1282:TYR:O	3:D:1285:VAL:HG12	1.99	0.62
3:D:156:ARG:NH2	3:D:191:SER:OG	2.32	0.62
5:F:134:VAL:HG22	5:F:273:MET:HE3	1.80	0.62
2:I:821:ARG:NH2	2:I:1082:ILE:HG21	2.08	0.62
1:A:118:ASP:H	1:A:121:VAL:HB	1.64	0.62
1:A:152:TYR:CZ	2:C:824:GLN:HA	2.34	0.62
3:D:1177:ILE:HD12	3:D:1186:TYR:HB3	1.81	0.62
5:L:274:ARG:NH2	5:L:369:GLU:OE2	2.32	0.62
2:C:559:CYS:HB2	2:C:662:SER:HB3	1.81	0.62
5:L:540:LEU:HD12	5:L:610:PHE:CD1	2.34	0.62
2:C:748:ILE:HD11	2:C:967:LEU:HD12	1.80	0.62
3:D:388:ARG:HB2	3:D:390:LEU:HD13	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:118:ASP:HB2	1:H:121:VAL:CG2	2.29	0.62
2:I:968:GLU:HG3	2:I:1018:TYR:HE1	1.63	0.62
3:J:746:LEU:HD22	3:J:754:ILE:HD11	1.81	0.62
1:A:12:ARG:HG3	1:B:230:ALA:HB1	1.82	0.62
2:C:1024:GLU:HA	2:C:1027:LYS:HD3	1.81	0.62
2:C:887:VAL:HB	2:C:913:VAL:CG2	2.28	0.62
3:D:1198:VAL:HB	3:D:1210:ILE:HA	1.82	0.62
2:I:1281:TYR:CE1	3:J:484:MET:HE3	2.35	0.62
3:J:155:GLU:HB2	3:J:158:GLN:HB2	1.82	0.62
5:L:119:ILE:HA	5:L:122:ARG:HD3	1.82	0.62
2:C:109:ALA:HB1	2:C:110:PRO:C	2.19	0.62
2:C:131:THR:HG23	2:C:133:ASN:N	2.15	0.62
2:C:814:ASP:OD2	2:C:1106:ARG:NH1	2.21	0.62
3:D:1318:SER:OG	3:D:1342:ASP:OD2	2.11	0.62
2:I:801:ARG:HG2	2:I:1094:VAL:HG23	1.81	0.62
1:H:48:LEU:HD21	3:J:535:ARG:HG3	1.82	0.62
2:C:23:ASP:OD1	2:C:23:ASP:N	2.32	0.62
3:D:1293:GLU:H	3:J:1226:VAL:HB	1.64	0.62
5:F:354:THR:O	5:F:358:VAL:HG23	1.98	0.62
3:J:1270:GLY:HA3	3:J:1298:VAL:HG22	1.81	0.62
3:J:620:PHE:CE1	3:J:624:ILE:HD11	2.35	0.62
1:B:73:GLY:HA2	1:B:134:THR:HG22	1.82	0.61
2:C:593:LYS:HE3	2:C:595:THR:HG22	1.82	0.61
2:C:878:THR:N	2:C:881:ASP:OD2	2.24	0.61
5:F:461:ASN:HB3	5:F:465:ARG:HH21	1.64	0.61
2:I:227:LYS:O	2:I:245:ARG:NH2	2.33	0.61
2:C:13:LYS:NZ	2:C:1148:ALA:O	2.32	0.61
2:C:836:LEU:HD12	2:C:836:LEU:N	2.15	0.61
3:D:697:MET:SD	3:D:741:ALA:HB3	2.40	0.61
2:C:710:VAL:HG13	2:C:717:VAL:HG21	1.82	0.61
3:D:190:LYS:HD3	3:D:235:GLU:HG2	1.81	0.61
1:G:60:GLU:O	1:G:142:MET:HB2	2.00	0.61
2:I:1273:MET:HG2	2:I:1276:TRP:CZ3	2.35	0.61
2:I:658:GLN:O	2:I:661:VAL:HG22	2.01	0.61
3:J:356:THR:OG1	3:J:357:VAL:N	2.34	0.61
5:F:316:PHE:HZ	5:F:334:SER:HA	1.64	0.61
2:I:896:THR:HB	2:I:897:PRO:HD2	1.81	0.61
3:J:1309:ILE:HG13	3:J:1310:THR:H	1.66	0.61
1:B:59:VAL:HG22	1:B:144:ILE:HG13	1.81	0.61
3:D:891:ASP:HA	3:D:1281:GLU:HG3	1.82	0.61
3:J:418:GLU:H	4:K:45:LYS:NZ	1.98	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:54:CYS:HA	1:A:148:ARG:HA	1.83	0.61
3:D:1149:ARG:NH2	3:D:1153:PRO:HG2	2.16	0.61
2:I:1246:ARG:HG2	2:I:1247:SER:N	2.15	0.61
1:G:66:HIS:NE2	2:I:929:ILE:HA	2.14	0.61
3:J:30:ILE:HG23	3:J:243:PRO:HG3	1.82	0.61
3:J:502:PRO:HB3	3:J:506:VAL:HG21	1.83	0.61
3:D:316:ILE:HA	3:D:323:PRO:HA	1.82	0.61
1:A:218:ARG:HG3	1:B:231:PHE:O	2.01	0.61
3:D:367:GLY:HA3	3:D:448:GLN:HB2	1.83	0.61
3:J:115:TRP:CE2	3:J:1329:THR:HG23	2.36	0.61
2:C:601:ASP:N	2:C:601:ASP:OD1	2.32	0.61
3:J:647:PRO:CG	3:J:697:MET:HB3	2.30	0.61
1:A:190:ALA:H	1:A:199:ASP:HA	1.66	0.61
2:C:488:MET:O	2:C:490:GLN:N	2.32	0.61
1:G:152:TYR:HD1	1:G:176:CYS:HB3	1.65	0.61
2:I:466:VAL:O	2:I:469:VAL:HG22	2.01	0.61
5:L:426:LYS:HE2	5:L:428:SER:OG	2.01	0.61
5:L:493:LYS:HA	5:L:496:LYS:HE2	1.81	0.61
1:B:153:VAL:HB	1:B:175:ALA:HB3	1.82	0.60
2:C:316:GLU:H	2:C:316:GLU:CD	2.04	0.60
2:C:667:LEU:HD21	2:C:704:MET:HB2	1.82	0.60
3:D:762:ASN:OD1	3:D:764:ARG:N	2.33	0.60
3:J:361:LEU:HD13	3:J:366:CYS:HA	1.82	0.60
1:H:33:ARG:HD2	2:I:1081:PRO:HG3	1.84	0.60
2:I:848:GLU:OE1	2:I:886:LYS:NZ	2.34	0.60
3:D:833:GLU:OE2	3:D:1247:LYS:NZ	2.35	0.60
2:I:1297:ASP:OD1	2:I:1300:GLY:N	2.25	0.60
2:I:346:TYR:OH	2:I:437:ASN:OD1	2.02	0.60
2:I:697:LYS:HA	2:I:795:ALA:HB2	1.83	0.60
3:J:418:GLU:H	4:K:45:LYS:HZ2	1.47	0.60
2:C:156:PHE:CZ	2:C:158:ASP:HB2	2.37	0.60
2:C:510:GLN:OE1	2:C:534:GLY:HA2	2.00	0.60
3:D:1280:VAL:CG1	3:D:1304:ARG:HH21	2.04	0.60
3:D:147:ILE:HG13	3:D:147:ILE:O	2.01	0.60
2:C:1246:ARG:NH2	3:D:348:ASP:OD1	2.34	0.60
3:D:514:THR:OG1	3:D:514:THR:O	2.19	0.60
3:D:854:ALA:CB	3:J:1372:ARG:HE	2.14	0.60
3:J:697:MET:SD	3:J:741:ALA:HB3	2.41	0.60
5:L:226:ALA:O	5:L:229:VAL:HG22	2.01	0.60
2:C:256:GLU:HB3	2:C:261:VAL:HG13	1.82	0.60
2:C:268:ARG:NH2	2:C:270:THR:HG21	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:35:PHE:CD1	3:D:101:ARG:HD3	2.37	0.60
3:J:138:VAL:HG21	3:J:145:VAL:HB	1.83	0.60
5:L:476:ARG:HG3	5:L:477:GLU:N	2.15	0.60
1:B:107:ILE:HG23	1:B:135:ASP:HA	1.82	0.60
2:C:138:ILE:HG22	2:C:139:ASN:N	2.16	0.60
3:D:342:LEU:HD11	3:D:1324:SER:HB3	1.82	0.60
3:D:375:GLU:OE2	3:D:378:LYS:HD2	2.02	0.60
2:I:1247:SER:HB3	3:J:375:GLU:O	2.01	0.60
3:J:536:LEU:HD13	3:J:541:LEU:HB2	1.83	0.60
2:I:1222:GLU:OE2	3:J:537:TYR:OH	2.19	0.60
3:J:888:CYS:SG	3:J:889:ASP:N	2.75	0.60
3:D:115:TRP:CE2	3:D:1329:THR:HG23	2.37	0.60
2:I:678:ARG:HG3	2:I:1108:ASN:HD22	1.66	0.60
2:I:1281:TYR:HE1	3:J:484:MET:HE3	1.66	0.60
2:I:42:ASP:OD2	2:I:46:GLN:HB3	2.02	0.60
2:I:519:ASN:HD21	2:I:796:LEU:HD23	1.67	0.60
5:L:299:LYS:HA	5:L:302:PHE:HB3	1.83	0.60
1:A:249:PHE:HB2	1:A:253:LEU:HD12	1.82	0.60
2:C:344:GLY:HA3	2:C:346:TYR:CZ	2.37	0.60
2:C:701:GLY:O	2:C:1184:THR:N	2.25	0.60
3:D:810:THR:CG2	3:D:893:GLY:HA3	2.32	0.60
2:C:122:VAL:HG23	5:F:472:GLN:HG3	1.83	0.60
1:A:61:ILE:HG22	1:A:62:ASP:H	1.66	0.60
1:B:151:GLY:O	1:B:177:TYR:HB2	2.02	0.60
2:C:150:HIS:CD2	2:C:454:ARG:HE	2.20	0.60
2:C:498:ILE:H	2:C:498:ILE:HD12	1.66	0.60
2:C:590:PRO:HG3	2:C:605:TYR:CZ	2.36	0.60
3:D:363:LEU:HG	3:D:363:LEU:O	2.02	0.60
3:D:641:ILE:HD13	3:D:641:ILE:O	2.02	0.60
2:I:407:ARG:HH21	2:I:414:ILE:HG22	1.65	0.60
2:I:674:ASP:OD1	2:I:1109:ILE:N	2.34	0.60
3:J:495:ASN:ND2	3:J:497:GLU:HB2	2.17	0.60
3:D:1309:ILE:HG13	3:D:1310:THR:N	2.17	0.59
1:G:65:LEU:CD2	1:G:65:LEU:H	2.15	0.59
1:G:228:LEU:HD22	1:H:221:ALA:HB1	1.84	0.59
2:I:591:TYR:HD2	2:I:606:LEU:HD13	1.66	0.59
3:J:521:LYS:NZ	3:J:540:GLY:O	2.24	0.59
5:L:233:ASP:O	5:L:236:LYS:HE2	2.02	0.59
5:L:245:ALA:O	5:L:249:ILE:HG13	2.01	0.59
5:L:486:ARG:CZ	5:L:486:ARG:HB2	2.31	0.59
1:B:73:GLY:HA2	1:B:134:THR:CG2	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:33:ARG:HH11	2:C:1081:PRO:HG3	1.67	0.59
2:C:864:LYS:HZ1	2:C:877:VAL:HG12	1.67	0.59
3:D:77:ARG:HG3	3:D:79:LYS:H	1.67	0.59
5:F:599:ARG:O	5:F:604:SER:OG	2.18	0.59
1:G:45:ARG:NH1	1:H:34:GLY:O	2.34	0.59
3:J:1344:LEU:O	3:J:1345:ARG:HB2	2.02	0.59
3:J:810:THR:HG23	3:J:811:GLU:H	1.67	0.59
5:L:127:ILE:O	5:L:130:VAL:HG22	2.02	0.59
2:C:1142:ARG:NH2	2:C:1165:SER:HB2	2.17	0.59
2:C:1313:HIS:HB2	3:D:474:LEU:HD13	1.83	0.59
1:G:172:LEU:HD12	1:G:172:LEU:H	1.67	0.59
2:I:1013:GLN:O	2:I:1017:GLN:HG2	2.02	0.59
2:I:1238:LEU:H	2:I:1238:LEU:HD12	1.68	0.59
2:I:4:SER:OG	2:I:5:TYR:N	2.35	0.59
2:I:1073:LYS:HE3	3:J:462:ASP:CB	2.32	0.59
1:A:9:LEU:HD13	1:A:32:GLU:OE2	2.03	0.59
1:B:34:GLY:N	1:B:199:ASP:OD2	2.29	0.59
2:C:615:VAL:HG13	2:C:651:ASP:N	2.17	0.59
3:D:1171:GLY:HA2	3:D:1193:TRP:HZ3	1.67	0.59
3:D:1270:GLY:HA3	3:D:1298:VAL:HG22	1.85	0.59
1:H:18:GLN:HA	1:H:24:ALA:HA	1.83	0.59
2:I:159:SER:O	2:I:160:ASP:HB2	2.01	0.59
3:J:1318:SER:OG	3:J:1342:ASP:OD2	2.17	0.59
1:B:182:ARG:NH1	3:D:581:MET:SD	2.75	0.59
5:F:227:GLN:HG2	5:F:252:LEU:HA	1.84	0.59
5:F:532:LEU:O	5:F:536:THR:HG23	2.02	0.59
2:I:878:THR:OG1	2:I:879:GLY:N	2.34	0.59
3:J:527:LEU:HD21	3:J:536:LEU:HG	1.83	0.59
1:A:53:GLY:O	1:A:149:GLY:N	2.27	0.59
1:B:153:VAL:O	1:B:175:ALA:N	2.34	0.59
1:B:197:ASP:O	1:B:198:LEU:HD13	2.02	0.59
3:D:665:GLN:HG3	3:D:669:GLN:HE21	1.67	0.59
2:C:1268:GLN:HG2	3:D:467:ALA:HB1	1.84	0.59
2:C:483:ASP:HB2	2:C:486:THR:HG22	1.83	0.59
2:C:617:ALA:HB3	2:C:653:MET:HG3	1.83	0.59
5:F:601:PRO:CA	5:F:604:SER:HB2	2.33	0.59
1:H:113:ALA:HB2	1:H:126:PRO:HB3	1.83	0.59
2:I:778:GLU:O	2:I:781:ASP:HB2	2.03	0.59
1:A:11:PRO:CB	1:A:30:PRO:HG2	2.33	0.59
5:F:124:GLU:HA	5:F:127:ILE:HD11	1.83	0.59
1:H:58:GLU:HA	1:H:171:LEU:O	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:389:PHE:HA	2:I:395:TYR:CD1	2.37	0.59
2:I:692:THR:OG1	2:I:827:ARG:O	2.20	0.59
5:L:479:THR:HG23	5:L:481:GLU:H	1.68	0.59
3:D:242:LEU:HD23	3:D:242:LEU:C	2.24	0.59
1:G:65:LEU:H	1:G:65:LEU:HD22	1.68	0.59
1:H:197:ASP:O	1:H:198:LEU:HD13	2.03	0.59
3:D:527:LEU:HB2	3:D:550:VAL:HG12	1.85	0.58
1:H:29:GLU:HB3	1:H:200:LYS:HG3	1.85	0.58
3:J:1344:LEU:HA	3:J:1349:GLU:HG3	1.85	0.58
3:J:416:ILE:HG12	3:J:441:LEU:HD21	1.83	0.58
3:J:516:ASP:HA	3:J:545:HIS:HB2	1.83	0.58
3:J:551:ARG:HA	3:J:568:SER:O	2.03	0.58
5:L:231:THR:CG2	5:L:249:ILE:HG12	2.33	0.58
2:C:673:HIS:HB3	2:C:1109:ILE:CG2	2.31	0.58
3:D:425:ARG:HH12	3:D:464:ASP:CG	2.06	0.58
2:I:632:ASP:O	2:I:647:ARG:HB2	2.02	0.58
3:J:30:ILE:CG2	3:J:243:PRO:HG3	2.32	0.58
3:J:930:LEU:HD11	3:J:1241:TYR:CE2	2.38	0.58
1:A:201:LEU:HG	1:A:203:ILE:HG13	1.85	0.58
3:J:335:GLN:HG2	3:J:343:LEU:HD13	1.85	0.58
5:L:544:THR:HG22	5:L:607:LEU:HD21	1.85	0.58
3:D:97:VAL:HG11	3:D:101:ARG:CZ	2.34	0.58
5:F:105:MET:HE3	5:F:385:ARG:HG2	1.86	0.58
2:I:314:ASN:O	2:I:352:ARG:NH1	2.29	0.58
2:I:143:ARG:NH2	2:I:512:SER:O	2.37	0.58
3:J:532:GLU:HA	3:J:535:ARG:HB3	1.86	0.58
3:J:62:PHE:CD1	3:J:247:PRO:HD3	2.38	0.58
3:J:155:GLU:N	3:J:158:GLN:OE1	2.33	0.58
3:J:843:VAL:HG11	3:J:897:HIS:O	2.03	0.58
5:L:225:ARG:O	5:L:229:VAL:HG13	2.04	0.58
4:E:83:VAL:HA	4:E:86:ILE:HG12	1.86	0.58
2:I:696:ASP:HB2	2:I:798:GLN:CG	2.32	0.58
3:J:1219:ASP:O	3:J:1222:ARG:N	2.36	0.58
3:J:1368:ASP:HA	3:J:1371:ARG:NH1	2.19	0.58
2:C:732:ILE:HD13	2:C:783:LEU:HD12	1.84	0.58
2:C:873:ILE:HG13	2:C:944:ARG:HH22	1.68	0.58
3:D:612:LEU:N	3:D:612:LEU:HD12	2.18	0.58
2:C:1192:GLU:OE2	3:D:764:ARG:NH1	2.36	0.58
5:F:281:ARG:HG2	5:F:285:ARG:HD2	1.85	0.58
5:F:577:GLY:HA3	5:F:583:THR:HG23	1.85	0.58
1:G:22:THR:HB	1:G:207:THR:O	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:29:GLU:CB	1:A:30:PRO:CD	2.79	0.58
2:C:1246:ARG:HG2	2:C:1247:SER:N	2.18	0.58
3:D:647:PRO:HG3	3:D:697:MET:HB3	1.85	0.58
3:D:707:ILE:HD11	3:D:716:GLN:HG2	1.85	0.58
1:H:100:LEU:HD21	1:H:121:VAL:HG11	1.85	0.58
1:H:179:PRO:HA	1:H:208:ASN:ND2	2.19	0.58
2:I:1030:GLU:OE2	2:I:1034:ARG:NH2	2.37	0.58
2:I:1120:ALA:HB1	2:I:1198:LEU:HD12	1.85	0.58
3:J:403:ARG:NE	3:J:405:GLU:OE2	2.24	0.58
3:J:259:ARG:CZ	5:L:505:ILE:HD11	2.34	0.58
2:C:151:ARG:CZ	2:C:445:ILE:HD11	2.33	0.58
2:C:169:LYS:HE2	2:C:190:PRO:O	2.03	0.58
2:C:49:LEU:HB2	2:C:73:TYR:CZ	2.39	0.58
5:F:137:TYR:CE2	5:F:273:MET:HG2	2.38	0.58
1:G:69:SER:O	1:G:78:ILE:HG12	2.03	0.58
2:C:1302:THR:HG22	5:F:531:PRO:HB3	1.86	0.58
2:C:994:ARG:HD2	2:C:997:TRP:CH2	2.39	0.58
3:D:839:VAL:CG1	3:D:864:LEU:HD12	2.34	0.58
3:D:418:GLU:H	4:E:45:LYS:HZ2	1.51	0.58
3:J:128:LEU:HD23	3:J:192:MET:HE3	1.84	0.58
2:I:810:TYR:CZ	3:J:359:PRO:HD2	2.39	0.58
2:C:229:ILE:HB	2:C:240:GLU:HB2	1.86	0.57
3:D:622:ASP:HB3	3:D:626:TYR:HE2	1.69	0.57
2:I:523:GLU:OE2	2:I:527:LYS:NZ	2.27	0.57
3:J:94:GLN:O	3:J:97:VAL:HG23	2.04	0.57
2:C:119:GLU:HB2	2:C:489:PRO:HD2	1.87	0.57
2:C:312:ALA:HB3	2:C:315:MET:HE3	1.85	0.57
1:G:52:PRO:HG2	1:G:219:ARG:HH21	1.67	0.57
2:I:206:ALA:O	2:I:209:ILE:HG22	2.04	0.57
2:I:836:LEU:N	2:I:836:LEU:HD12	2.19	0.57
3:J:1156:LEU:HD22	3:J:1156:LEU:N	2.19	0.57
3:J:1280:VAL:HG21	3:J:1304:ARG:NE	2.18	0.57
1:A:11:PRO:CA	1:A:30:PRO:CG	2.70	0.57
2:C:1253:LEU:HD22	2:C:1253:LEU:O	2.04	0.57
2:I:1260:GLY:HA2	2:I:1264:GLN:O	2.04	0.57
1:B:151:GLY:O	1:B:177:TYR:HD2	1.88	0.57
3:D:274:ASN:OD1	5:F:446:GLN:NE2	2.38	0.57
5:F:137:TYR:CD2	5:F:273:MET:HG2	2.39	0.57
2:I:371:ARG:HB3	2:I:374:GLU:OE2	2.04	0.57
3:J:600:ALA:O	3:J:603:LYS:HG2	2.05	0.57
3:J:298:MET:SD	5:L:402:LEU:HB3	2.44	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:38:THR:OG1	1:B:45:ARG:NH1	2.37	0.57
1:B:64:VAL:HG12	1:B:65:LEU:H	1.70	0.57
2:C:1268:GLN:HE22	3:D:352:ARG:NH1	2.02	0.57
2:C:568:ASN:HB2	2:C:571:LEU:HB2	1.86	0.57
3:D:356:THR:OG1	3:D:357:VAL:N	2.38	0.57
3:D:559:ALA:HB3	3:D:562:GLU:HB3	1.85	0.57
3:J:308:ASP:OD2	3:J:311:ARG:NE	2.38	0.57
3:J:425:ARG:HG2	3:J:426:ALA:H	1.68	0.57
5:L:390:ILE:O	5:L:393:LYS:HB2	2.05	0.57
2:C:798:GLN:OE1	2:C:827:ARG:HB2	2.05	0.57
5:F:461:ASN:O	5:F:465:ARG:HG2	2.04	0.57
1:G:230:ALA:HB3	1:G:231:PHE:CE2	2.39	0.57
2:I:10:ARG:HA	2:I:1172:LEU:HD23	1.87	0.57
2:I:185:ASP:HB2	2:I:197:ARG:HG3	1.87	0.57
2:I:12:ARG:NH2	2:I:698:PRO:O	2.25	0.57
2:C:936:ARG:HE	2:C:1047:LEU:HD23	1.70	0.57
2:C:468:LEU:O	2:C:471:VAL:HG12	2.04	0.57
3:D:518:VAL:CG1	3:D:707:ILE:HD13	2.33	0.57
5:F:561:MET:HA	5:F:567:MET:HE1	1.86	0.57
1:H:99:ILE:HD12	1:H:145:LYS:HB2	1.87	0.57
2:I:1101:LEU:O	3:J:731:ARG:HD3	2.05	0.57
3:J:1280:VAL:HG11	3:J:1304:ARG:HE	1.70	0.57
2:C:1238:LEU:HD12	2:C:1238:LEU:N	2.18	0.57
3:D:210:SER:HB2	3:D:213:LYS:HB2	1.86	0.57
3:D:555:TYR:O	3:D:586:GLY:O	2.23	0.57
5:F:503:GLU:HG3	5:F:504:PRO:HD2	1.87	0.57
1:H:99:ILE:HG13	1:H:144:ILE:O	2.05	0.57
2:I:145:ILE:HB	2:I:456:VAL:HG22	1.86	0.57
1:G:75:GLN:O	2:I:729:ALA:HB2	2.04	0.57
3:J:1343:GLU:HG3	3:J:1373:ARG:NH2	2.20	0.57
3:J:72:CYS:HB3	3:J:88:CYS:SG	2.45	0.57
2:C:596:ASP:OD2	2:C:597:GLY:N	2.36	0.57
3:D:19:ALA:HB2	3:D:1373:ARG:HH22	1.68	0.57
3:D:94:GLN:O	3:D:97:VAL:HG23	2.04	0.57
2:I:1191:LYS:HD3	2:I:1193:ALA:H	1.70	0.57
2:C:980:VAL:O	2:C:984:VAL:HB	2.05	0.57
3:D:388:ARG:HB2	3:D:390:LEU:CD1	2.35	0.57
3:D:854:ALA:HB2	3:J:1372:ARG:CB	2.34	0.57
2:I:1246:ARG:NH2	2:I:1249:GLY:H	2.03	0.57
2:I:1334:GLY:O	3:J:25:ALA:HB3	2.05	0.57
2:I:480:SER:HB3	2:I:481:LEU:HD22	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:606:LEU:HD23	2:I:611:GLU:HA	1.86	0.57
5:L:421:TYR:CE2	5:L:422:ARG:HD2	2.40	0.57
2:I:170:VAL:HG23	2:I:171:LEU:N	2.20	0.56
2:C:170:VAL:O	2:C:171:LEU:HG	2.05	0.56
2:C:886:LYS:CE	2:C:916:SER:HB3	2.35	0.56
5:F:226:ALA:O	5:F:229:VAL:HG22	2.05	0.56
5:F:379:MET:HG3	5:F:379:MET:O	2.01	0.56
2:I:1223:ARG:NH2	3:J:719:PHE:O	2.39	0.56
2:I:1281:TYR:CD1	3:J:484:MET:HG2	2.40	0.56
2:I:239:MET:O	2:I:284:LEU:HD12	2.03	0.56
2:I:593:LYS:HE3	2:I:595:THR:HG22	1.87	0.56
2:I:655:VAL:N	2:I:659:GLN:OE1	2.37	0.56
3:J:45:ASN:O	3:J:46:TYR:HD2	1.87	0.56
2:C:1305:TYR:OH	5:F:532:LEU:HG	2.05	0.56
2:C:495:ALA:HB3	5:F:471:LEU:HD13	1.85	0.56
2:C:62:TYR:O	2:C:64:GLY:N	2.38	0.56
3:D:133:ARG:NH1	3:D:136:GLU:OE1	2.38	0.56
2:I:468:LEU:O	2:I:471:VAL:HG12	2.06	0.56
3:J:1203:ARG:NH1	3:J:1205:GLU:HG2	2.18	0.56
3:J:536:LEU:O	3:J:539:SER:OG	2.24	0.56
1:A:23:HIS:HB2	1:A:206:GLU:HA	1.87	0.56
3:D:224:LEU:O	3:D:228:VAL:HG23	2.04	0.56
3:D:299:LEU:O	3:D:299:LEU:HG	2.02	0.56
3:D:357:VAL:HG22	3:D:461:PHE:CE1	2.39	0.56
3:D:657:ALA:O	3:D:661:VAL:HG12	2.06	0.56
3:D:817:HIS:HE1	3:D:860:ARG:HE	1.45	0.56
5:F:343:LYS:H	5:F:343:LYS:HD2	1.70	0.56
2:I:40:GLU:O	2:I:73:TYR:OH	2.23	0.56
1:A:23:HIS:CB	1:A:206:GLU:HA	2.35	0.56
1:B:82:LEU:O	1:B:85:LEU:HB2	2.05	0.56
2:C:65:ASN:HB3	2:C:105:TYR:HB2	1.86	0.56
2:C:685:MET:HE1	2:C:1071:GLY:HA2	1.87	0.56
3:D:674:THR:HG1	3:D:677:GLU:HB2	1.71	0.56
1:G:38:THR:HG23	1:H:42:ALA:HA	1.88	0.56
2:I:615:VAL:HG13	2:I:651:ASP:H	1.69	0.56
2:I:818:VAL:HG22	2:I:1096:ILE:HG12	1.87	0.56
3:J:1343:GLU:HB3	3:J:1345:ARG:HD3	1.87	0.56
3:J:425:ARG:HH11	3:J:459:ALA:HA	1.69	0.56
2:I:1276:TRP:CE2	3:J:801:VAL:HG21	2.41	0.56
1:G:9:LEU:HD23	1:G:10:LYS:N	2.20	0.56
2:I:101:ARG:HH21	2:I:118:LYS:HE3	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1252:SER:O	2:I:1256:GLN:HA	2.06	0.56
1:G:73:GLY:N	2:I:728:ASP:OD2	2.35	0.56
2:I:870:ILE:HB	2:I:944:ARG:HD3	1.86	0.56
3:J:1230:THR:O	3:J:1234:VAL:HG22	2.05	0.56
3:J:735:ALA:O	3:J:739:GLN:HG3	2.06	0.56
3:J:741:ALA:O	3:J:762:ASN:ND2	2.39	0.56
1:B:112:ALA:HB2	1:B:128:HIS:HB3	1.86	0.56
2:C:301:TYR:HB2	2:C:311:CYS:SG	2.46	0.56
2:C:905:ILE:O	5:F:599:ARG:NH1	2.27	0.56
2:C:887:VAL:HB	2:C:913:VAL:HG21	1.87	0.56
1:G:102:LEU:O	1:G:141:SER:HB2	2.06	0.56
1:H:191:ARG:HH12	3:J:370:LYS:NZ	2.03	0.56
1:H:56:VAL:HG22	1:H:144:ILE:HD11	1.87	0.56
2:I:1297:ASP:O	2:I:1301:ARG:HG2	2.05	0.56
2:I:888:THR:HG23	2:I:916:SER:OG	2.06	0.56
2:C:561:ILE:O	2:C:680:LEU:HD12	2.05	0.56
3:D:1167:LYS:NZ	3:D:1170:LYS:HB2	2.20	0.56
5:F:225:ARG:O	5:F:229:VAL:HG13	2.05	0.56
2:I:158:ASP:OD1	2:I:159:SER:N	2.37	0.56
3:J:930:LEU:HD11	3:J:1241:TYR:CZ	2.41	0.56
3:J:620:PHE:O	3:J:624:ILE:HG13	2.06	0.56
2:C:22:LEU:HD13	2:C:23:ASP:N	2.21	0.56
2:C:211:ARG:HD3	2:C:357:ASN:O	2.06	0.56
2:C:768:MET:O	2:C:784:ALA:HB1	2.06	0.56
3:D:425:ARG:NH1	3:D:459:ALA:HA	2.21	0.56
2:I:720:ARG:HA	2:I:779:ARG:HG3	1.86	0.56
2:I:1282:GLY:O	3:J:1360:GLY:HA3	2.06	0.56
1:A:36:GLY:CA	1:A:187:VAL:HG11	2.36	0.56
2:C:828:PHE:HB3	2:C:1060:ILE:HD12	1.88	0.56
2:C:1185:PRO:HB2	2:C:1188:ASP:HB3	1.87	0.56
2:C:170:VAL:HG23	2:C:171:LEU:N	2.21	0.56
3:D:650:LYS:HE2	3:D:654:ILE:HD11	1.87	0.56
3:D:700:ASN:O	3:D:704:GLU:HB2	2.06	0.56
2:I:124:MET:HB3	2:I:493:ILE:HD11	1.87	0.56
2:I:136:PHE:O	2:I:143:ARG:N	2.33	0.56
2:I:538:LEU:HA	2:I:542:ARG:CZ	2.35	0.56
2:I:673:HIS:HB3	2:I:1109:ILE:CG2	2.32	0.56
2:I:891:GLY:O	2:I:892:GLU:HG3	2.06	0.56
3:J:621:ALA:HA	3:J:624:ILE:HD12	1.87	0.56
2:C:241:LEU:HD21	2:C:246:LEU:HD11	1.88	0.56
2:C:397:LEU:HD12	2:C:397:LEU:H	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:466:VAL:O	2:C:470:ARG:HG2	2.05	0.56
3:D:1140:ARG:HH21	3:D:1236:GLU:CG	2.15	0.56
3:D:347:VAL:HG12	3:D:348:ASP:O	2.05	0.56
1:H:44:ARG:CG	1:H:183:ILE:HD13	2.36	0.56
2:I:814:ASP:OD2	2:I:1106:ARG:NH1	2.38	0.56
2:I:138:ILE:HG22	2:I:139:ASN:N	2.19	0.56
3:J:127:LEU:O	3:J:220:ARG:NH2	2.39	0.56
3:J:518:VAL:HG23	3:J:547:ARG:HH22	1.70	0.56
2:C:1299:ASN:HD22	2:C:1303:LYS:CE	2.18	0.55
2:C:1073:LYS:HE3	3:D:462:ASP:HB2	1.88	0.55
2:I:1305:TYR:OH	5:L:532:LEU:HG	2.07	0.55
2:I:494:ASN:HD22	2:I:497:PRO:HD3	1.71	0.55
3:J:1358:PRO:HB3	3:J:1366:HIS:CD2	2.41	0.55
3:J:709:ARG:C	3:J:711:GLY:H	2.08	0.55
3:J:789:LYS:HE3	3:J:931:THR:O	2.05	0.55
3:J:849:LEU:HB3	3:J:853:THR:HG23	1.87	0.55
1:A:152:TYR:CD1	2:C:824:GLN:HG2	2.41	0.55
1:A:49:SER:OG	1:A:50:SER:N	2.38	0.55
1:B:60:GLU:HG3	1:B:143:ARG:O	2.06	0.55
2:C:379:GLU:H	2:C:379:GLU:CD	2.08	0.55
3:D:140:TYR:HB3	5:F:100:MET:SD	2.46	0.55
5:F:492:ASP:HB2	5:F:495:ARG:NH1	2.20	0.55
1:G:191:ARG:NH1	1:G:198:LEU:H	2.04	0.55
2:I:1132:LEU:HD22	2:I:1177:ARG:NH1	2.21	0.55
2:I:103:VAL:HG12	2:I:116:ASP:HB3	1.87	0.55
2:I:555:TYR:OH	2:I:654:ASP:OD1	2.11	0.55
3:J:156:ARG:NH2	3:J:191:SER:OG	2.37	0.55
5:L:547:VAL:HG23	5:L:603:ARG:NH1	2.21	0.55
1:A:269:CYS:O	1:A:273:GLU:HG2	2.06	0.55
1:A:279:GLY:HA3	1:A:321:TRP:CZ2	2.42	0.55
1:B:99:ILE:HG13	1:B:144:ILE:O	2.05	0.55
2:C:228:VAL:HB	2:C:335:THR:OG1	2.06	0.55
2:C:607:SER:OG	2:C:608:ALA:N	2.32	0.55
3:D:527:LEU:HD23	3:D:532:GLU:HG3	1.88	0.55
2:C:1254:VAL:O	3:D:99:ARG:NH2	2.37	0.55
1:H:60:GLU:HG2	1:H:143:ARG:HB2	1.87	0.55
2:I:1085:MET:HB2	2:I:1093:PRO:HB3	1.87	0.55
2:I:1101:LEU:HD13	3:J:504:GLN:HB2	1.88	0.55
2:I:324:LYS:O	2:I:327:GLN:NE2	2.40	0.55
2:I:807:TRP:CE3	2:I:808:ASN:HB2	2.41	0.55
2:I:898:GLU:OE1	2:I:898:GLU:N	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:45:ASN:HB3	3:J:48:THR:O	2.06	0.55
1:B:155:ALA:N	1:B:174:ASP:OD1	2.39	0.55
2:C:1076:ILE:HD11	2:C:1078:LYS:O	2.06	0.55
2:C:202:ARG:HH11	2:C:369:MET:HG2	1.71	0.55
2:C:1281:TYR:CD1	3:D:484:MET:HG2	2.42	0.55
3:D:536:LEU:HD12	3:D:542:ALA:HB2	1.89	0.55
3:J:418:GLU:HB2	4:K:45:LYS:HB2	1.88	0.55
1:A:12:ARG:N	1:A:30:PRO:HG2	2.12	0.55
2:C:55:SER:OG	2:C:56:VAL:N	2.39	0.55
2:C:637:ARG:HA	2:C:642:SER:HA	1.87	0.55
5:F:227:GLN:NE2	5:F:251:LYS:HZ1	2.03	0.55
2:I:557:ARG:HH21	2:I:607:SER:C	2.09	0.55
2:I:1331:ARG:HG2	3:J:33:TRP:CH2	2.42	0.55
2:C:224:PHE:CD2	2:C:347:ILE:HG13	2.41	0.55
2:C:758:ARG:HH22	2:C:761:GLN:CG	2.08	0.55
5:F:354:THR:N	5:F:357:GLN:OE1	2.40	0.55
2:I:151:ARG:NE	2:I:445:ILE:HD11	2.21	0.55
5:L:266:PHE:O	5:L:269:LEU:HB2	2.06	0.55
3:D:314:ARG:HH22	3:D:323:PRO:HG3	1.69	0.55
3:D:418:GLU:H	4:E:45:LYS:NZ	2.04	0.55
3:J:1159:ILE:CA	3:J:1206:ARG:HB3	2.36	0.55
3:J:1327:GLU:OE2	3:J:1329:THR:HB	2.06	0.55
3:J:490:ILE:O	3:J:499:ILE:HG22	2.06	0.55
1:A:60:GLU:HB2	1:A:170:ARG:HG2	1.88	0.55
2:C:1151:LEU:HD23	2:C:1197:GLU:OE2	2.07	0.55
3:D:152:THR:OG1	3:D:153:ASN:N	2.38	0.55
5:F:166:VAL:O	5:F:167:ASP:HB2	2.07	0.55
1:H:60:GLU:OE1	1:H:142:MET:HB2	2.06	0.55
2:I:678:ARG:NH1	2:I:1071:GLY:O	2.37	0.55
2:I:156:PHE:CE1	2:I:445:ILE:HG13	2.42	0.55
2:I:498:ILE:H	2:I:498:ILE:HD12	1.71	0.55
2:I:968:GLU:HG3	2:I:1018:TYR:CE1	2.41	0.55
3:J:568:SER:OG	3:J:569:LEU:N	2.37	0.55
5:L:314:THR:O	5:L:318:ALA:HB3	2.07	0.55
3:D:1277:GLY:O	3:D:1278:GLU:HG2	2.07	0.55
3:D:425:ARG:HG2	3:D:426:ALA:H	1.71	0.55
3:D:515:ARG:O	3:D:545:HIS:HB3	2.07	0.55
1:G:150:ARG:NH1	1:H:7:GLU:O	2.32	0.55
2:I:421:SER:N	2:I:424:ASP:OD2	2.37	0.55
3:J:1174:ARG:NH2	3:J:1187:GLU:OE2	2.40	0.55
3:J:492:SER:HB2	3:J:499:ILE:HD13	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1184:THR:HG23	2:C:1189:GLY:HA3	1.89	0.55
2:C:297:VAL:HG12	2:C:315:MET:O	2.06	0.55
3:D:58:CYS:SG	3:D:60:ARG:N	2.80	0.55
2:I:1077:SER:HA	3:J:356:THR:OG1	2.06	0.55
2:I:1131:MET:HE2	2:I:1141:LEU:HD12	1.88	0.55
2:I:1184:THR:HG23	2:I:1189:GLY:CA	2.36	0.55
2:I:590:PRO:HG3	2:I:605:TYR:CZ	2.42	0.55
2:I:1333:LEU:HD22	3:J:307:LEU:CD2	2.37	0.55
3:J:411:ILE:O	3:J:414:GLU:HB2	2.06	0.55
3:J:845:ALA:CB	3:J:881:LYS:HD2	2.37	0.55
1:B:43:LEU:HD21	1:B:221:ALA:HB2	1.89	0.54
1:B:35:PHE:HA	1:B:38:THR:HG22	1.89	0.54
2:C:269:ILE:HG23	2:C:273:HIS:HB2	1.89	0.54
3:D:121:PRO:HD2	3:D:123:ARG:NH2	2.22	0.54
3:D:355:ILE:HD13	3:D:466:MET:HG3	1.89	0.54
5:F:484:ALA:HB1	5:F:491:GLU:HG3	1.88	0.54
1:H:82:LEU:HD23	1:H:85:LEU:HD12	1.89	0.54
2:I:133:ASN:OD1	2:I:713:GLY:HA3	2.07	0.54
2:I:397:LEU:O	2:I:398:SER:OG	2.25	0.54
3:J:1356:LEU:O	3:J:1366:HIS:HE1	1.89	0.54
1:A:234:LEU:HB2	1:B:218:ARG:NH2	2.22	0.54
2:C:1124:ILE:HG21	2:C:1180:MET:HG3	1.89	0.54
1:A:70:THR:HG21	2:C:755:LYS:HE2	1.88	0.54
3:D:518:VAL:HG11	3:D:707:ILE:HD13	1.89	0.54
2:I:1132:LEU:HD22	2:I:1177:ARG:HH12	1.71	0.54
2:I:221:LEU:HD11	2:I:314:ASN:HB2	1.88	0.54
2:I:557:ARG:NH2	2:I:607:SER:O	2.40	0.54
2:I:615:VAL:HG21	2:I:645:PHE:CD2	2.42	0.54
2:I:514:PHE:HE2	2:I:760:ASN:HB3	1.72	0.54
3:J:1191:PRO:HB2	3:J:1194:ARG:HD3	1.89	0.54
3:J:1280:VAL:CG1	3:J:1304:ARG:HH21	2.09	0.54
4:K:15:ASN:O	4:K:16:ARG:HB3	2.08	0.54
1:A:158:ARG:HH21	1:A:172:LEU:HB3	1.73	0.54
2:C:1246:ARG:NE	3:D:348:ASP:OD1	2.41	0.54
2:C:1281:TYR:CE2	3:D:431:ARG:HG3	2.43	0.54
2:C:189:ASP:OD1	2:C:193:ASN:N	2.22	0.54
2:C:518:ASN:OD1	2:C:519:ASN:N	2.40	0.54
3:D:1165:PHE:HE1	3:D:1200:GLU:HB3	1.72	0.54
5:F:316:PHE:O	5:F:320:ILE:HG13	2.07	0.54
1:H:40:GLY:HA3	1:H:185:TYR:CD1	2.42	0.54
1:H:16:ILE:HG13	1:H:26:VAL:HG22	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:418:GLU:HG3	4:K:45:LYS:N	2.11	0.54
3:J:97:VAL:HG11	3:J:101:ARG:NH2	2.22	0.54
1:A:83:LEU:CD2	2:C:694:ARG:HE	2.21	0.54
2:C:175:ARG:NH1	2:C:183:TRP:HZ3	2.06	0.54
3:D:1295:ASN:CG	3:D:1298:VAL:HB	2.27	0.54
3:D:244:VAL:HA	3:D:269:TYR:OH	2.07	0.54
3:D:491:LEU:HD23	3:D:498:PRO:HA	1.89	0.54
1:G:152:TYR:CD1	1:G:176:CYS:HB3	2.41	0.54
1:G:153:VAL:O	1:G:175:ALA:N	2.38	0.54
1:H:61:ILE:HG22	1:H:64:VAL:H	1.72	0.54
1:H:7:GLU:CD	1:H:8:PHE:H	2.10	0.54
3:J:1194:ARG:N	3:J:1194:ARG:HD2	2.22	0.54
1:A:90:VAL:HG22	1:A:91:ARG:H	1.73	0.54
2:C:801:ARG:HB2	2:C:1229:TYR:CZ	2.43	0.54
2:C:247:ARG:HH12	2:C:271:ALA:HB2	1.72	0.54
5:F:316:PHE:CZ	5:F:334:SER:HA	2.42	0.54
5:F:569:THR:OG1	5:F:570:ASP:N	2.30	0.54
2:I:1275:VAL:HG22	2:I:1287:LEU:HD11	1.89	0.54
2:I:617:ALA:HA	2:I:636:CYS:SG	2.47	0.54
3:J:97:VAL:HG11	3:J:101:ARG:CZ	2.37	0.54
3:J:481:ARG:NH1	4:K:3:ARG:O	2.40	0.54
4:K:35:LYS:NZ	4:K:71:GLU:OE2	2.38	0.54
5:L:316:PHE:HZ	5:L:334:SER:HA	1.72	0.54
2:C:149:LEU:HD13	2:C:453:ILE:HG12	1.89	0.54
2:C:262:TYR:CZ	2:C:282:VAL:HG21	2.43	0.54
2:C:519:ASN:OD1	2:C:519:ASN:C	2.45	0.54
2:C:866:ASP:HA	2:C:872:TYR:OH	2.07	0.54
3:D:19:ALA:O	3:D:20:ILE:HG13	2.07	0.54
3:D:24:LEU:HB2	3:D:232:ASN:OD1	2.08	0.54
3:D:322:ARG:NH1	3:D:322:ARG:HB2	2.22	0.54
3:D:369:PRO:HB3	3:D:444:GLY:O	2.07	0.54
1:B:196:THR:HG23	3:D:443:GLU:HG3	1.90	0.54
3:D:702:GLN:O	3:D:718:SER:N	2.22	0.54
1:G:102:LEU:HD13	1:G:103:ASN:N	2.23	0.54
2:I:4:SER:HB3	2:I:7:GLU:OE2	2.08	0.54
1:B:134:THR:HG23	1:B:135:ASP:N	2.22	0.54
1:B:19:VAL:HB	1:B:23:HIS:HD2	1.70	0.54
3:D:378:LYS:NZ	3:D:382:TYR:OH	2.36	0.54
3:D:520:ALA:HB3	3:D:546:ALA:HB2	1.88	0.54
2:I:146:VAL:O	2:I:511:LEU:HD23	2.08	0.54
3:J:474:LEU:O	3:J:477:GLN:N	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:K:22:VAL:HG13	4:K:64:LEU:HD12	1.90	0.54
2:C:97:ARG:HH22	5:F:475:GLY:HA3	1.73	0.54
1:A:316:MET:SD	5:F:600:HIS:ND1	2.81	0.54
1:G:77:ASP:OD2	2:I:755:LYS:NZ	2.36	0.54
1:H:219:ARG:O	1:H:223:ILE:HG13	2.07	0.54
2:I:1202:GLY:O	2:I:1203:ASP:HB2	2.08	0.54
3:J:58:CYS:SG	3:J:59:ALA:N	2.80	0.54
4:K:53:GLU:HB3	4:K:59:ILE:HG13	1.88	0.54
1:A:44:ARG:HG3	1:A:183:ILE:HG22	1.89	0.54
2:C:886:LYS:H	2:C:917:SER:HB3	1.73	0.54
2:C:1281:TYR:OH	3:D:431:ARG:O	2.24	0.54
4:E:60:ASN:ND2	4:E:63:ILE:HD13	2.22	0.54
3:J:536:LEU:HD12	3:J:542:ALA:HB2	1.89	0.54
3:J:620:PHE:CD1	3:J:624:ILE:HD11	2.43	0.54
5:L:460:ILE:O	5:L:463:LEU:HB2	2.08	0.54
3:D:362:ARG:H	3:D:365:GLN:NE2	2.06	0.54
5:F:343:LYS:O	5:F:347:ILE:HG13	2.08	0.54
1:H:91:ARG:HG3	1:H:122:GLU:HB3	1.90	0.54
2:I:673:HIS:CB	2:I:1109:ILE:HG22	2.36	0.54
3:J:905:ARG:CZ	3:J:910:ASN:HD21	2.20	0.54
2:C:726:TYR:CE2	2:C:728:ASP:HB2	2.43	0.53
3:D:1158:GLU:HB3	3:D:1186:TYR:CE1	2.43	0.53
3:D:40:LYS:O	3:D:55:GLY:HA2	2.08	0.53
5:F:128:ASN:HA	5:F:131:GLN:HE21	1.73	0.53
5:F:470:MET:CE	5:F:486:ARG:HH12	2.21	0.53
2:I:412:GLU:HB3	2:I:413:GLU:OE1	2.08	0.53
3:J:1371:ARG:HB3	3:J:1371:ARG:CZ	2.39	0.53
5:L:248:GLU:HG2	5:L:251:LYS:NZ	2.23	0.53
1:A:207:THR:HG22	1:A:208:ASN:N	2.23	0.53
3:D:293:ARG:O	3:D:296:LYS:N	2.41	0.53
3:D:580:TRP:CZ3	3:D:589:TYR:HA	2.44	0.53
3:D:824:PRO:HD3	3:D:835:LEU:HD13	1.91	0.53
1:G:67:GLU:O	1:G:78:ILE:HB	2.08	0.53
2:I:1116:HIS:HE1	3:J:641:ILE:N	2.01	0.53
3:J:442:ILE:HG22	3:J:443:GLU:O	2.08	0.53
3:J:623:GLN:O	3:J:627:THR:HG22	2.08	0.53
2:I:808:ASN:H	3:J:633:ALA:HB2	1.72	0.53
4:K:59:ILE:HD13	4:K:63:ILE:HG21	1.91	0.53
5:L:561:MET:HG2	5:L:576:VAL:HG22	1.91	0.53
1:A:88:LEU:HD12	1:A:125:LYS:HD3	1.89	0.53
1:A:47:LEU:HD13	1:A:183:ILE:HG12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:25:LYS:HG3	1:B:204:GLU:HB2	1.90	0.53
2:C:412:GLU:HB3	2:C:413:GLU:OE1	2.09	0.53
2:C:985:GLU:HG2	2:C:988:LYS:HD2	1.89	0.53
3:D:30:ILE:CG2	3:D:243:PRO:HG3	2.38	0.53
3:D:744:ARG:O	3:D:759:ILE:HB	2.08	0.53
5:F:231:THR:CG2	5:F:249:ILE:HG12	2.37	0.53
1:A:250:ASP:HB2	5:F:601:PRO:HB3	1.90	0.53
1:H:103:ASN:HA	1:H:141:SER:HB2	1.88	0.53
2:I:1142:ARG:HD3	2:I:1161:LEU:HD11	1.91	0.53
2:I:301:TYR:HB2	2:I:311:CYS:SG	2.48	0.53
3:J:1169:THR:CG2	3:J:1192:LYS:HD3	2.37	0.53
1:B:175:ALA:HB1	1:B:177:TYR:CZ	2.44	0.53
2:C:176:ILE:HD11	2:C:428:VAL:HG21	1.91	0.53
3:D:808:VAL:HG12	3:D:809:VAL:N	2.23	0.53
3:D:872:LEU:HD22	3:D:877:VAL:HG11	1.91	0.53
2:I:632:ASP:HA	2:I:647:ARG:HD2	1.90	0.53
2:I:963:GLU:O	2:I:967:LEU:HB2	2.08	0.53
3:J:58:CYS:SG	3:J:60:ARG:N	2.79	0.53
3:J:647:PRO:HD3	3:J:697:MET:HB3	1.91	0.53
3:J:808:VAL:HG12	3:J:809:VAL:N	2.23	0.53
2:C:1136:GLN:HE21	2:C:1140:LYS:HZ3	1.56	0.53
2:C:1281:TYR:HE2	3:D:431:ARG:HG3	1.73	0.53
2:C:529:ARG:O	2:C:530:ILE:HD13	2.08	0.53
2:C:667:LEU:CD2	2:C:704:MET:HB2	2.38	0.53
2:C:755:LYS:O	2:C:757:THR:HG23	2.09	0.53
3:D:114:ILE:HB	3:D:304:ASP:OD1	2.08	0.53
3:D:113:HIS:CE1	3:D:115:TRP:HB2	2.43	0.53
3:D:124:ILE:HG12	3:D:237:MET:SD	2.48	0.53
2:C:1257:GLN:HE22	3:D:340:GLN:HE21	1.56	0.53
5:F:230:VAL:O	5:F:234:THR:HG23	2.08	0.53
5:F:512:GLY:C	5:F:514:ASP:H	2.12	0.53
1:G:13:LEU:HA	1:G:28:LEU:HA	1.89	0.53
1:G:31:LEU:HB2	1:G:199:ASP:HB2	1.90	0.53
2:I:990:ASP:HA	2:I:997:TRP:HZ2	1.73	0.53
3:J:1157:ALA:O	3:J:1207:GLY:N	2.39	0.53
3:D:1372:ARG:HE	3:J:854:ALA:HB2	1.74	0.53
2:C:344:GLY:HA3	2:C:346:TYR:CE2	2.44	0.53
2:C:759:SER:HG	2:C:763:THR:N	2.05	0.53
3:D:930:LEU:HD11	3:D:1241:TYR:CE2	2.43	0.53
5:F:124:GLU:O	5:F:127:ILE:HG13	2.09	0.53
5:F:133:SER:OG	5:F:364:ARG:HD2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:262:THR:O	5:F:507:MET:HB2	2.09	0.53
1:G:167:PRO:HB2	1:G:170:ARG:HB2	1.90	0.53
2:I:195:PHE:HE1	2:I:205:PRO:HG3	1.73	0.53
1:G:77:ASP:OD2	2:I:729:ALA:HB1	2.09	0.53
3:J:1138:LEU:HB3	3:J:1139:PRO:HD3	1.91	0.53
3:J:263:SER:OG	3:J:264:ASP:N	2.41	0.53
3:J:440:VAL:O	3:J:442:ILE:HG12	2.08	0.53
3:J:795:TYR:CE2	3:J:799:ARG:NE	2.77	0.53
3:J:832:LYS:HD3	3:J:1242:ARG:HH12	1.72	0.53
1:B:149:GLY:HA3	1:B:177:TYR:CE2	2.43	0.53
4:E:60:ASN:HD21	4:E:63:ILE:HD13	1.73	0.53
2:I:1211:ARG:O	2:I:1212:LEU:HD12	2.09	0.53
2:I:202:ARG:HH11	2:I:369:MET:CG	2.21	0.53
2:I:478:ARG:NH2	2:I:487:LEU:HD13	2.24	0.53
2:I:57:PHE:CD1	2:I:58:PRO:HA	2.42	0.53
3:J:123:ARG:HH22	3:J:1334:GLU:HG3	1.73	0.53
3:J:123:ARG:HD2	3:J:1337:VAL:HG11	1.91	0.53
3:J:572:THR:HG21	3:J:589:TYR:OH	2.08	0.53
1:A:11:PRO:HD3	1:B:227:GLN:OE1	2.08	0.53
3:D:131:PRO:HG2	3:D:134:ASP:HB2	1.91	0.53
5:F:281:ARG:O	5:F:285:ARG:HG3	2.09	0.53
1:G:182:ARG:NH2	1:G:206:GLU:OE2	2.42	0.53
3:J:363:LEU:O	3:J:363:LEU:HG	2.08	0.53
2:C:724:VAL:HG23	2:C:775:GLU:O	2.09	0.53
2:C:799:ASN:HD22	2:C:799:ASN:C	2.12	0.53
2:C:835:GLU:C	2:C:836:LEU:HD12	2.29	0.53
2:C:1305:TYR:HE1	3:D:379:PRO:HG3	1.73	0.53
3:D:62:PHE:O	3:D:101:ARG:HD2	2.09	0.53
3:J:1140:ARG:NH2	3:J:1144:LEU:HD21	2.24	0.53
3:J:28:ASP:OD1	3:J:31:ARG:NH1	2.41	0.53
3:J:93:THR:HG22	3:J:94:GLN:H	1.74	0.53
2:C:1124:ILE:HB	2:C:1180:MET:HB2	1.91	0.53
2:C:1247:SER:HB3	3:D:375:GLU:O	2.09	0.53
2:C:720:ARG:NE	2:C:736:VAL:HG11	2.24	0.53
3:D:35:PHE:CD1	3:D:101:ARG:HB3	2.41	0.53
3:D:1349:GLU:OE2	3:D:1349:GLU:N	2.36	0.53
3:D:26:SER:OG	3:D:28:ASP:N	2.42	0.53
3:D:56:LEU:H	3:D:56:LEU:CD1	2.14	0.53
3:D:552:ILE:HG21	3:D:589:TYR:CE1	2.44	0.53
3:J:1259:GLN:NE2	3:J:1262:ARG:HH12	2.06	0.53
3:J:35:PHE:CD1	3:J:101:ARG:HD3	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:746:ALA:HA	2:C:974:ARG:HH21	1.74	0.52
3:D:1226:VAL:O	3:D:1230:THR:HG22	2.09	0.52
2:C:813:GLU:HB2	3:D:461:PHE:HB2	1.91	0.52
3:D:521:LYS:NZ	3:D:540:GLY:O	2.20	0.52
5:F:445:ASP:OD2	5:F:451:ARG:HD2	2.09	0.52
1:G:60:GLU:HB2	1:G:170:ARG:NH1	2.23	0.52
2:I:582:ASN:HB3	2:I:586:PHE:N	2.24	0.52
2:I:698:PRO:HG3	2:I:1231:TYR:CE2	2.44	0.52
2:I:739:ASP:OD1	2:I:739:ASP:N	2.42	0.52
3:J:1157:ALA:HB2	3:J:1210:ILE:HD11	1.90	0.52
3:J:514:THR:HG23	3:J:596:LEU:HB2	1.89	0.52
5:L:571:TYR:HD1	5:L:575:GLU:HG2	1.74	0.52
3:D:1156:LEU:N	3:D:1156:LEU:HD22	2.24	0.52
3:D:1163:VAL:HG23	3:D:1177:ILE:HA	1.90	0.52
3:D:1266:ILE:HB	3:D:1274:PHE:O	2.09	0.52
3:D:140:TYR:O	3:D:297:ARG:NH1	2.42	0.52
5:F:315:TRP:CH2	5:F:341:LEU:HD11	2.44	0.52
1:G:68:TYR:HE1	2:I:929:ILE:HG21	1.72	0.52
3:J:421:VAL:HG22	3:J:439:PRO:HG3	1.91	0.52
5:L:364:ARG:HA	5:L:367:ILE:HD12	1.91	0.52
5:L:484:ALA:HB1	5:L:491:GLU:HB2	1.91	0.52
5:L:601:PRO:CA	5:L:604:SER:HB2	2.39	0.52
2:C:69:GLN:HG3	2:C:101:ARG:HB3	1.91	0.52
2:C:1284:ALA:N	3:D:479:GLU:OE1	2.42	0.52
2:C:378:ARG:NH1	2:C:382:GLU:OE2	2.41	0.52
3:D:1309:ILE:HG13	3:D:1310:THR:H	1.74	0.52
3:D:195:GLU:O	3:D:198:CYS:HB2	2.09	0.52
2:C:1272:GLU:HB2	3:D:342:LEU:O	2.09	0.52
5:F:114:GLU:HG3	5:F:115:GLY:N	2.24	0.52
5:F:486:ARG:HB2	5:F:486:ARG:CZ	2.38	0.52
3:J:1179:PRO:CD	3:J:1184:ASP:HA	2.40	0.52
3:J:708:ASN:HB3	3:J:712:GLN:O	2.09	0.52
1:B:197:ASP:C	1:B:198:LEU:HD22	2.30	0.52
2:C:1193:ALA:O	2:C:1197:GLU:N	2.32	0.52
2:C:797:GLY:N	2:C:1231:TYR:OH	2.40	0.52
2:C:158:ASP:CG	2:C:159:SER:H	2.12	0.52
2:C:98:VAL:C	2:C:121:GLU:HA	2.30	0.52
3:D:77:ARG:HG3	3:D:79:LYS:HB3	1.90	0.52
2:C:490:GLN:NE2	5:F:472:GLN:HE22	2.08	0.52
2:I:1106:ARG:HD2	2:I:1106:ARG:H	1.75	0.52
2:I:16:GLY:O	2:I:1156:ARG:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:123:ARG:NH2	3:J:1334:GLU:HG3	2.24	0.52
1:B:61:ILE:HB	1:B:64:VAL:O	2.10	0.52
2:C:3:TYR:HE1	2:C:11:ILE:HD11	1.74	0.52
2:C:799:ASN:O	2:C:799:ASN:ND2	2.41	0.52
2:C:992:LEU:H	2:C:992:LEU:HD23	1.75	0.52
3:D:1179:PRO:CD	3:D:1184:ASP:HA	2.40	0.52
5:F:376:LYS:O	5:F:380:VAL:HG23	2.10	0.52
2:I:514:PHE:CE2	2:I:760:ASN:HB3	2.45	0.52
3:J:201:LEU:HD13	3:J:221:ILE:HB	1.92	0.52
1:A:125:LYS:HE2	1:A:128:HIS:CG	2.44	0.52
1:A:249:PHE:C	5:F:605:GLU:OE2	2.48	0.52
2:C:62:TYR:CZ	2:C:476:LYS:HB3	2.44	0.52
2:C:62:TYR:C	2:C:64:GLY:H	2.13	0.52
2:C:906:PHE:CE2	5:F:608:ARG:HG3	2.45	0.52
3:D:179:LYS:HB2	3:D:184:ALA:HB2	1.91	0.52
3:D:442:ILE:HG22	3:D:443:GLU:O	2.09	0.52
4:E:15:ASN:O	4:E:16:ARG:HB3	2.09	0.52
1:G:182:ARG:O	1:G:183:ILE:HD12	2.10	0.52
2:I:1234:LYS:HE2	2:I:1238:LEU:HD23	1.91	0.52
2:I:127:ILE:HG13	2:I:127:ILE:O	2.09	0.52
2:I:515:MET:O	2:I:515:MET:HG2	2.09	0.52
3:J:548:VAL:HG12	3:J:550:VAL:HG13	1.90	0.52
1:A:145:LYS:NZ	1:A:147:GLN:OE1	2.43	0.52
1:B:215:GLU:HA	1:B:218:ARG:HD2	1.91	0.52
2:C:300:ASP:OD1	2:C:312:ALA:HA	2.09	0.52
3:D:436:ALA:HB3	3:D:485:MET:HA	1.92	0.52
1:H:195:ARG:HB3	1:H:198:LEU:HD21	1.92	0.52
2:I:61:SER:HB3	2:I:479:LEU:HB3	1.92	0.52
2:I:670:PHE:HA	2:I:672:GLU:OE2	2.09	0.52
2:I:972:PHE:CZ	2:I:998:LEU:HD11	2.45	0.52
1:B:188:GLU:HG3	1:B:200:LYS:HB3	1.92	0.52
3:D:45:ASN:O	3:D:46:TYR:HB3	2.09	0.52
3:D:473:THR:HG23	3:D:476:ALA:H	1.75	0.52
3:D:528:THR:O	3:D:551:ARG:HB3	2.09	0.52
3:D:674:THR:N	3:D:677:GLU:OE1	2.37	0.52
2:I:1035:LYS:O	2:I:1038:GLN:HG2	2.10	0.52
2:I:598:VAL:HG13	2:I:628:HIS:HE1	1.75	0.52
1:B:77:ASP:O	1:B:81:ILE:HG13	2.10	0.52
2:C:397:LEU:O	2:C:398:SER:OG	2.24	0.52
2:C:692:THR:OG1	2:C:693:LEU:N	2.42	0.52
3:D:1169:THR:HG23	3:D:1192:LYS:HD3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:31:ARG:NE	3:D:106:GLU:OE2	2.41	0.52
5:F:479:THR:HG23	5:F:481:GLU:N	2.25	0.52
2:I:325:LEU:O	2:I:328:SER:OG	2.28	0.52
3:J:142:GLU:OE2	5:L:100:MET:HE2	2.10	0.52
3:J:412:LEU:HA	3:J:415:VAL:HG22	1.91	0.52
1:A:187:VAL:CG1	1:A:201:LEU:HD13	2.39	0.52
2:C:189:ASP:OD1	2:C:192:ASP:N	2.43	0.52
1:A:261:GLU:CD	2:C:859:GLU:HB2	2.31	0.52
3:D:789:LYS:NZ	3:D:931:THR:O	2.42	0.52
3:D:847:ASP:CA	3:D:860:ARG:H	2.20	0.52
2:I:582:ASN:HB3	2:I:586:PHE:H	1.75	0.52
2:C:146:VAL:HG13	2:C:529:ARG:HB3	1.92	0.51
3:D:1291:GLU:HG2	3:D:1297:LYS:HD3	1.91	0.51
3:D:270:ARG:NH2	5:F:449:THR:HG23	2.25	0.51
2:I:1210:ILE:O	2:I:1224:PRO:HA	2.09	0.51
2:I:299:LYS:HG2	2:I:334:GLU:OE1	2.11	0.51
2:I:551:HIS:CG	2:I:552:PRO:HD2	2.45	0.51
2:I:564:PRO:HD2	2:I:572:ILE:HB	1.92	0.51
3:J:518:VAL:HA	3:J:547:ARG:CZ	2.40	0.51
3:J:850:LYS:HG2	3:J:857:LEU:HD23	1.92	0.51
5:L:448:ARG:NH2	5:L:500:ILE:O	2.43	0.51
1:B:60:GLU:OE1	1:B:142:MET:HB2	2.10	0.51
2:C:268:ARG:HH21	2:C:270:THR:CG2	2.23	0.51
2:C:553:THR:O	2:C:557:ARG:HD2	2.11	0.51
3:D:290:ILE:HD12	3:D:290:ILE:H	1.75	0.51
1:H:134:THR:HG23	1:H:135:ASP:N	2.24	0.51
3:J:1344:LEU:HB3	3:J:1350:ASN:HD21	1.73	0.51
3:J:471:PRO:HB3	3:J:476:ALA:HB1	1.92	0.51
3:J:817:HIS:CD2	3:J:860:ARG:HH21	2.28	0.51
5:L:431:ALA:O	5:L:434:TRP:N	2.43	0.51
2:C:1246:ARG:NH2	2:C:1249:GLY:H	2.08	0.51
2:C:201:ARG:NH2	2:C:370:MET:O	2.37	0.51
2:C:543:ALA:O	2:C:548:ARG:NH1	2.43	0.51
3:D:805:GLN:OE1	3:D:1348:LYS:HD3	2.10	0.51
1:A:250:ASP:HB2	5:F:601:PRO:CB	2.40	0.51
1:G:112:ALA:HB2	1:G:128:HIS:HB3	1.92	0.51
3:J:664:ILE:HG22	3:J:678:ARG:HG2	1.93	0.51
3:J:925:GLU:HB3	3:J:926:PRO:HD3	1.93	0.51
4:K:39:VAL:HG22	4:K:40:PRO:HD2	1.91	0.51
5:L:580:PHE:C	5:L:582:VAL:H	2.14	0.51
1:A:155:ALA:CA	1:A:158:ARG:HG3	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:179:PRO:HA	1:B:208:ASN:ND2	2.24	0.51
2:C:1137:GLU:HG2	2:C:1140:LYS:HG2	1.92	0.51
2:C:358:ASP:OD1	2:C:360:LEU:N	2.44	0.51
2:C:1279:GLU:HG2	3:D:1357:ILE:HD13	1.92	0.51
5:F:227:GLN:HE22	5:F:251:LYS:NZ	2.06	0.51
5:F:315:TRP:HZ2	5:F:341:LEU:HD21	1.74	0.51
1:H:62:ASP:OD1	1:H:142:MET:HB3	2.11	0.51
3:J:1233:ILE:O	3:J:1237:VAL:HG12	2.09	0.51
3:J:77:ARG:HG3	3:J:79:LYS:H	1.76	0.51
5:F:164:GLY:O	5:F:260:ARG:HB2	2.11	0.51
1:H:60:GLU:CD	1:H:143:ARG:H	2.12	0.51
2:I:241:LEU:HD21	2:I:246:LEU:HD11	1.92	0.51
2:I:397:LEU:N	2:I:397:LEU:HD12	2.26	0.51
2:I:812:PHE:CE2	3:J:451:PRO:HB3	2.46	0.51
1:A:91:ARG:HD3	1:A:210:THR:O	2.10	0.51
5:F:101:TYR:O	5:F:104:GLU:N	2.42	0.51
2:I:1046:VAL:HG21	2:I:1049:ILE:HD11	1.92	0.51
2:I:197:ARG:NH2	2:I:203:LYS:HB2	2.26	0.51
2:I:26:TYR:CZ	2:I:28:LEU:HB2	2.46	0.51
3:J:1149:ARG:HG3	3:J:1216:ALA:HB2	1.91	0.51
3:J:54:ASP:OD1	3:J:54:ASP:N	2.42	0.51
2:C:158:ASP:HB3	2:C:173:ASN:OD1	2.11	0.51
1:G:9:LEU:HD12	1:G:195:ARG:NH2	2.25	0.51
1:H:153:VAL:O	1:H:175:ALA:N	2.43	0.51
2:I:302:ILE:HG22	2:I:309:LEU:HA	1.93	0.51
3:J:114:ILE:HB	3:J:304:ASP:OD1	2.11	0.51
3:J:405:GLU:O	3:J:408:VAL:HG22	2.10	0.51
3:J:470:VAL:HG12	3:J:472:LEU:CD2	2.41	0.51
3:J:56:LEU:N	3:J:56:LEU:HD12	2.24	0.51
2:C:1152:GLY:O	2:C:1153:ALA:HB2	2.11	0.51
2:C:14:ASP:OD2	2:C:1156:ARG:NE	2.42	0.51
2:I:1131:MET:HE2	2:I:1141:LEU:HA	1.91	0.51
2:I:943:LYS:O	2:I:947:GLU:HG3	2.11	0.51
2:C:195:PHE:CD1	2:C:203:LYS:HG2	2.46	0.51
2:C:231:GLU:HG2	2:C:332:ARG:NH2	2.26	0.51
3:D:1165:PHE:CE1	3:D:1200:GLU:HB3	2.46	0.51
3:D:1203:ARG:NH2	3:D:1205:GLU:HG2	2.19	0.51
3:D:45:ASN:O	3:D:46:TYR:HD2	1.93	0.51
3:D:849:LEU:HD13	3:D:849:LEU:H	1.76	0.51
3:J:1158:GLU:HB3	3:J:1186:TYR:CE1	2.46	0.51
3:J:320:ASN:OD1	3:J:322:ARG:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:6:THR:O	1:B:6:THR:OG1	2.21	0.51
2:C:894:GLN:O	2:C:894:GLN:HG3	2.11	0.51
3:D:34:SER:HB2	3:D:104:HIS:HB3	1.93	0.51
3:D:556:GLU:O	3:D:564:VAL:N	2.28	0.51
3:D:75:TYR:HD2	3:D:80:HIS:CD2	2.29	0.51
3:J:682:VAL:O	3:J:685:ILE:HG12	2.10	0.51
2:C:490:GLN:CD	5:F:472:GLN:NE2	2.64	0.50
3:D:22:ILE:O	3:D:1339:GLY:HA2	2.11	0.50
3:D:495:ASN:OD1	3:D:495:ASN:N	2.43	0.50
3:D:925:GLU:HB3	3:D:926:PRO:HD3	1.93	0.50
4:E:50:ALA:O	4:E:54:ILE:HG12	2.11	0.50
5:F:387:VAL:HG11	5:F:409:ASN:OD1	2.11	0.50
2:I:1281:TYR:OH	3:J:434:ILE:O	2.29	0.50
1:A:57:THR:HG22	1:A:158:ARG:NH2	2.26	0.50
2:C:1112:ILE:O	2:C:1115:THR:N	2.44	0.50
2:C:1191:LYS:HD3	2:C:1193:ALA:H	1.76	0.50
2:C:1267:GLY:HA3	3:D:347:VAL:O	2.12	0.50
2:C:229:ILE:HG21	2:C:240:GLU:OE2	2.12	0.50
2:C:91:THR:HG21	2:C:503:LYS:HE2	1.93	0.50
2:C:452:ARG:NH1	2:C:584:TYR:O	2.43	0.50
1:A:75:GLN:HA	2:C:729:ALA:N	2.26	0.50
3:D:516:ASP:OD1	3:D:516:ASP:N	2.44	0.50
3:D:664:ILE:HG21	3:D:681:LYS:HG2	1.93	0.50
2:I:238:GLN:HB3	2:I:284:LEU:HD11	1.93	0.50
2:I:921:PRO:O	2:I:924:VAL:HG22	2.11	0.50
3:J:1261:LEU:HD13	3:J:1304:ARG:HD2	1.93	0.50
3:J:1286:LYS:HD2	3:J:1290:ARG:NH2	2.27	0.50
1:A:207:THR:HG22	1:A:209:GLY:H	1.76	0.50
1:A:228:LEU:HA	1:A:231:PHE:HB2	1.93	0.50
2:C:397:LEU:HD12	2:C:397:LEU:N	2.26	0.50
3:D:574:VAL:O	3:D:578:ILE:HG13	2.11	0.50
1:G:65:LEU:N	1:G:65:LEU:HD22	2.26	0.50
2:I:4:SER:HB3	2:I:7:GLU:CD	2.31	0.50
2:I:623:LEU:HA	2:I:630:VAL:HG23	1.92	0.50
2:I:757:THR:O	2:I:833:ILE:HD12	2.11	0.50
3:J:746:LEU:HD23	3:J:758:PRO:HG3	1.93	0.50
2:C:323:ALA:O	2:C:327:GLN:HG3	2.12	0.50
1:A:152:TYR:OH	2:C:824:GLN:HA	2.11	0.50
3:D:1157:ALA:HB2	3:D:1210:ILE:HD11	1.93	0.50
3:D:155:GLU:HB2	3:D:158:GLN:HB2	1.93	0.50
2:C:618:GLN:OE1	3:D:770:LEU:HD13	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:844:THR:OG1	3:D:860:ARG:O	2.20	0.50
1:G:88:LEU:HB2	1:G:128:HIS:CD2	2.46	0.50
2:I:101:ARG:HE	2:I:118:LYS:HD2	1.77	0.50
3:J:255:LEU:HB2	3:J:259:ARG:O	2.12	0.50
3:J:825:VAL:C	3:J:826:ILE:HG13	2.32	0.50
5:L:161:LEU:O	5:L:262:VAL:HG23	2.11	0.50
2:C:1268:GLN:OE1	3:D:352:ARG:HG2	2.12	0.50
2:C:886:LYS:NZ	2:C:916:SER:HB3	2.26	0.50
3:D:188:LEU:O	3:D:191:SER:OG	2.25	0.50
3:D:839:VAL:HG12	3:D:839:VAL:O	2.12	0.50
5:F:120:ALA:HA	5:F:123:ILE:HD12	1.93	0.50
1:H:118:ASP:HB2	1:H:121:VAL:HG23	1.93	0.50
1:H:19:VAL:HB	1:H:23:HIS:CD2	2.46	0.50
2:I:745:GLU:N	2:I:1017:GLN:HG3	2.26	0.50
3:J:355:ILE:HG21	3:J:466:MET:HG3	1.93	0.50
2:C:887:VAL:HB	2:C:913:VAL:HG22	1.92	0.50
3:D:1184:ASP:O	3:D:1186:TYR:N	2.45	0.50
3:D:750:PRO:HA	3:D:777:HIS:CE1	2.47	0.50
5:F:125:ASP:N	5:F:125:ASP:OD1	2.43	0.50
5:F:292:VAL:HG13	5:F:297:MET:O	2.11	0.50
5:F:478:PRO:HB2	5:F:483:LEU:CD1	2.41	0.50
5:F:478:PRO:HB2	5:F:483:LEU:HD11	1.92	0.50
2:I:157:PHE:CZ	2:I:431:LYS:HG2	2.47	0.50
2:I:556:GLY:HA2	2:I:659:GLN:O	2.12	0.50
3:J:205:LEU:HD23	3:J:217:LEU:HG	1.94	0.50
3:J:516:ASP:OD1	3:J:516:ASP:N	2.44	0.50
1:A:114:ASP:N	1:A:114:ASP:OD1	2.44	0.50
3:D:114:ILE:HD13	3:D:304:ASP:CG	2.32	0.50
3:D:817:HIS:NE2	3:D:860:ARG:NH2	2.59	0.50
3:D:905:ARG:NH1	4:E:10:VAL:HG11	2.27	0.50
1:H:78:ILE:O	1:H:82:LEU:HG	2.12	0.50
3:J:1246:VAL:HG12	3:J:1248:ILE:HG13	1.92	0.50
3:J:1266:ILE:HD12	3:J:1273:ASP:O	2.12	0.50
3:J:77:ARG:HB3	3:J:80:HIS:CE1	2.47	0.50
3:J:68:TYR:HA	3:J:92:VAL:HG23	1.93	0.50
1:B:16:ILE:HG12	1:B:26:VAL:CG1	2.41	0.50
2:C:1149:TYR:HE2	2:C:1180:MET:SD	2.35	0.50
2:C:1328:LYS:O	2:C:1332:SER:N	2.45	0.50
2:C:18:ARG:NH1	2:C:621:SER:O	2.45	0.50
2:C:209:ILE:O	2:C:213:LEU:HG	2.12	0.50
3:D:1215:GLU:HG3	3:D:1220:ILE:HD11	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:1371:ARG:HB3	3:D:1371:ARG:CZ	2.42	0.50
5:L:166:VAL:O	5:L:167:ASP:HB2	2.12	0.50
5:L:289:LYS:HE3	5:L:293:GLU:HG2	1.93	0.50
1:A:177:TYR:O	1:A:178:SER:HB2	2.11	0.50
1:A:76:GLU:OE2	1:A:76:GLU:N	2.45	0.50
2:C:566:GLY:H	2:C:569:ILE:CG1	2.23	0.50
2:C:705:GLU:CD	2:C:705:GLU:H	2.14	0.50
3:D:1183:SER:OG	3:D:1185:PRO:HD3	2.12	0.50
3:D:1347:LEU:O	3:D:1348:LYS:C	2.50	0.50
3:D:1347:LEU:HG	3:D:1357:ILE:HG23	1.93	0.50
3:D:847:ASP:N	3:D:847:ASP:OD1	2.33	0.50
1:G:99:ILE:HA	1:G:144:ILE:O	2.12	0.50
3:J:1293:GLU:OE1	3:J:1294:ALA:N	2.38	0.50
3:J:349:TYR:CD1	3:J:472:LEU:HD11	2.47	0.50
3:J:481:ARG:O	3:J:485:MET:HB2	2.12	0.50
3:J:800:LEU:O	3:J:803:VAL:HG12	2.12	0.50
2:C:1103:VAL:HG22	2:C:1111:GLN:NE2	2.27	0.49
2:C:672:GLU:HG2	2:C:1187:PHE:HA	1.94	0.49
2:C:538:LEU:HD22	2:C:543:ALA:HB2	1.93	0.49
5:F:281:ARG:HA	5:F:284:GLU:OE1	2.11	0.49
2:I:521:LEU:O	2:I:525:THR:N	2.40	0.49
2:I:866:ASP:HA	2:I:872:TYR:CZ	2.46	0.49
3:J:244:VAL:HA	3:J:269:TYR:OH	2.11	0.49
5:L:265:GLN:O	5:L:269:LEU:HG	2.12	0.49
2:C:1197:GLU:O	2:C:1200:LYS:HB2	2.11	0.49
2:C:1151:LEU:CD1	2:C:1198:LEU:HD23	2.41	0.49
2:C:1253:LEU:HD13	2:C:1253:LEU:C	2.32	0.49
2:C:496:LYS:C	2:C:496:LYS:HD2	2.32	0.49
3:D:712:GLN:CD	3:D:712:GLN:H	2.15	0.49
3:D:93:THR:HG22	3:D:94:GLN:H	1.77	0.49
5:F:484:ALA:HB1	5:F:491:GLU:CG	2.43	0.49
1:A:318:LEU:HD11	5:F:600:HIS:NE2	2.28	0.49
2:I:1199:LEU:HD13	2:I:1206:THR:HA	1.94	0.49
2:I:23:ASP:N	2:I:23:ASP:OD1	2.44	0.49
2:I:358:ASP:OD1	2:I:360:LEU:HB3	2.12	0.49
3:J:120:LEU:HB3	3:J:121:PRO:HD3	1.94	0.49
3:J:491:LEU:HD22	3:J:496:GLY:O	2.12	0.49
5:L:407:GLU:HG3	5:L:442:SER:OG	2.12	0.49
5:L:572:THR:O	5:L:576:VAL:HG23	2.12	0.49
1:A:102:LEU:HB2	1:A:115:ILE:HG23	1.94	0.49
1:B:149:GLY:HA3	1:B:177:TYR:CG	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:490:GLN:HG3	5:F:472:GLN:OE1	2.11	0.49
3:D:1159:ILE:CA	3:D:1206:ARG:HB3	2.41	0.49
3:D:870:ASP:O	3:D:874:GLU:HG2	2.12	0.49
2:I:478:ARG:CZ	2:I:487:LEU:HD13	2.42	0.49
2:I:794:LEU:CD2	2:I:796:LEU:HD11	2.43	0.49
3:J:1280:VAL:O	3:J:1284:ARG:HB3	2.13	0.49
3:J:804:ALA:O	3:J:805:GLN:C	2.51	0.49
1:A:29:GLU:CB	1:A:30:PRO:HD3	2.38	0.49
1:A:75:GLN:C	2:C:729:ALA:HB2	2.33	0.49
2:C:799:ASN:C	2:C:799:ASN:ND2	2.65	0.49
3:D:1280:VAL:O	3:D:1284:ARG:HB3	2.12	0.49
3:D:1333:THR:O	3:D:1336:ALA:N	2.46	0.49
3:D:450:HIS:HE1	3:D:452:LEU:HD12	1.76	0.49
3:D:514:THR:OG1	3:D:594:GLN:O	2.30	0.49
5:F:276:MET:O	5:F:280:VAL:HG23	2.12	0.49
2:I:1070:HIS:CD2	2:I:1111:GLN:HA	2.47	0.49
2:I:1312:ASN:OD1	2:I:1314:GLN:HG3	2.13	0.49
3:J:642:ASP:HA	3:J:764:ARG:HH21	1.75	0.49
3:J:903:LEU:HD23	3:J:905:ARG:HD3	1.93	0.49
5:L:248:GLU:HA	5:L:251:LYS:HE3	1.95	0.49
5:L:479:THR:HG22	5:L:482:GLU:HB2	1.94	0.49
5:L:606:VAL:HG22	5:L:607:LEU:HD12	1.95	0.49
2:C:446:ASP:OD1	2:C:547:VAL:HG12	2.11	0.49
2:C:615:VAL:HG22	2:C:650:VAL:HA	1.94	0.49
3:D:1154:ALA:N	3:D:1214:PRO:O	2.34	0.49
3:D:19:ALA:CB	3:D:1373:ARG:HH22	2.26	0.49
3:D:291:ILE:O	3:D:292:VAL:C	2.47	0.49
5:F:119:ILE:HA	5:F:122:ARG:HD3	1.95	0.49
1:H:73:GLY:HA2	1:H:134:THR:CG2	2.40	0.49
3:D:1227:HIS:CG	3:J:1293:GLU:HG2	2.47	0.49
3:J:597:GLY:O	3:J:601:ILE:HB	2.12	0.49
3:J:844:THR:HB	3:J:860:ARG:O	2.12	0.49
2:C:801:ARG:O	2:C:1095:ASP:HB2	2.12	0.49
2:C:516:ASP:OD1	2:C:517:GLN:N	2.44	0.49
2:C:896:THR:OG1	2:C:899:GLU:HG3	2.11	0.49
3:D:367:GLY:N	3:D:448:GLN:O	2.42	0.49
5:F:314:THR:O	5:F:318:ALA:HB3	2.12	0.49
1:G:166:ARG:O	1:G:167:PRO:C	2.51	0.49
1:H:47:LEU:HD13	1:H:183:ILE:HG21	1.93	0.49
1:H:47:LEU:HD22	1:H:180:VAL:HG11	1.94	0.49
2:I:1132:LEU:HB3	2:I:1177:ARG:NH2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:545:HIS:NE2	3:J:719:PHE:HE1	2.11	0.49
2:C:1136:GLN:O	2:C:1137:GLU:HB3	2.11	0.49
2:C:98:VAL:O	2:C:121:GLU:HA	2.13	0.49
2:C:518:ASN:O	2:C:519:ASN:HB2	2.12	0.49
2:C:596:ASP:OD2	2:C:598:VAL:HG23	2.12	0.49
3:D:502:PRO:HB3	3:D:506:VAL:HG11	1.95	0.49
1:G:228:LEU:HD21	1:H:224:LEU:HD23	1.94	0.49
1:G:228:LEU:O	1:G:231:PHE:HD2	1.95	0.49
1:G:23:HIS:ND1	1:G:205:MET:O	2.45	0.49
2:I:658:GLN:NE2	2:I:1186:VAL:HG23	2.27	0.49
2:I:807:TRP:HB2	2:I:1097:VAL:HG11	1.95	0.49
5:L:161:LEU:C	5:L:262:VAL:HG23	2.33	0.49
5:L:601:PRO:HB3	5:L:608:ARG:NH2	2.28	0.49
1:A:46:ILE:HD11	1:B:38:THR:HG21	1.95	0.49
2:C:208:ILE:HD11	2:C:365:GLU:HB3	1.95	0.49
3:D:227:PHE:O	3:D:230:SER:HB3	2.12	0.49
5:F:340:ALA:HA	5:F:343:LYS:NZ	2.28	0.49
1:H:133:LEU:HA	1:H:133:LEU:HD12	1.64	0.49
1:H:19:VAL:HB	1:H:23:HIS:HD2	1.77	0.49
2:I:1130:ALA:O	2:I:1134:GLN:N	2.46	0.49
2:I:1152:GLY:O	2:I:1153:ALA:HB2	2.13	0.49
3:J:1165:PHE:HD2	3:J:1173:ARG:CD	2.26	0.49
3:J:1184:ASP:O	3:J:1186:TYR:N	2.46	0.49
3:J:454:CYS:SG	3:J:461:PHE:CZ	3.06	0.49
3:J:85:CYS:HB3	3:J:88:CYS:O	2.11	0.49
4:K:59:ILE:HD12	4:K:64:LEU:HD21	1.95	0.49
5:L:289:LYS:HA	5:L:293:GLU:OE1	2.13	0.49
1:B:91:ARG:HG3	1:B:122:GLU:HB3	1.95	0.49
2:C:191:LYS:O	2:C:192:ASP:HB2	2.13	0.49
2:C:478:ARG:HG2	2:C:492:MET:HG2	1.95	0.49
2:C:718:ALA:HB2	2:C:783:LEU:CD2	2.43	0.49
3:D:1283:SER:O	3:D:1286:LYS:N	2.45	0.49
2:C:1284:ALA:CB	3:D:1356:LEU:HD22	2.41	0.49
1:G:160:HIS:CG	1:G:161:SER:N	2.80	0.49
1:G:75:GLN:HA	2:I:729:ALA:H	1.78	0.49
1:H:60:GLU:CG	1:H:143:ARG:HB2	2.42	0.49
1:H:59:VAL:HG22	1:H:144:ILE:HG13	1.95	0.49
2:I:175:ARG:NH1	2:I:200:ARG:HH12	2.11	0.49
2:I:20:GLN:HG2	2:I:1156:ARG:NH2	2.27	0.49
2:I:90:VAL:HG12	2:I:91:THR:H	1.77	0.49
3:J:334:LYS:HB3	5:L:516:ASP:OD2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:425:ARG:HH12	3:J:464:ASP:CG	2.16	0.49
5:L:148:TYR:HE1	5:L:158:LEU:HD21	1.77	0.49
5:L:261:LEU:H	5:L:261:LEU:HD12	1.78	0.49
5:L:603:ARG:NH1	5:L:603:ARG:HA	2.27	0.49
1:A:321:TRP:HA	1:A:322:PRO:HA	1.64	0.49
1:B:100:LEU:HD11	1:B:121:VAL:HG21	1.94	0.49
2:C:1212:LEU:HD22	2:C:1225:VAL:CG2	2.41	0.49
2:C:959:ASP:O	2:C:963:GLU:HG2	2.12	0.49
3:D:843:VAL:HG11	3:D:897:HIS:O	2.12	0.49
1:H:64:VAL:HG12	1:H:65:LEU:H	1.77	0.49
2:I:1219:GLU:OE2	3:J:538:ARG:NH1	2.31	0.49
2:I:1220:GLN:HG2	2:I:1221:PHE:H	1.77	0.49
2:I:139:ASN:O	2:I:141:THR:HG23	2.12	0.49
2:I:158:ASP:CG	2:I:159:SER:H	2.14	0.49
2:I:674:ASP:OD1	2:I:1110:GLY:N	2.25	0.49
3:J:322:ARG:NH1	3:J:322:ARG:HB2	2.27	0.49
5:L:230:VAL:O	5:L:234:THR:HG23	2.13	0.49
1:A:262:LEU:HD21	1:A:306:VAL:HG11	1.95	0.48
2:C:1238:LEU:H	2:C:1238:LEU:CD1	2.16	0.48
2:C:1333:LEU:HD21	3:D:327:LEU:HB2	1.95	0.48
2:C:866:ASP:HA	2:C:872:TYR:CZ	2.48	0.48
2:C:90:VAL:HG12	2:C:91:THR:N	2.27	0.48
3:D:1194:ARG:N	3:D:1194:ARG:HD2	2.28	0.48
3:D:825:VAL:C	3:D:826:ILE:HG13	2.33	0.48
1:G:64:VAL:HG12	1:G:66:HIS:H	1.78	0.48
1:H:185:TYR:HB2	1:H:201:LEU:HD11	1.95	0.48
2:I:367:TYR:CE2	2:I:376:PRO:HA	2.48	0.48
2:I:745:GLU:H	2:I:1017:GLN:HG3	1.78	0.48
3:J:848:VAL:CG2	3:J:858:VAL:HG13	2.42	0.48
1:A:195:ARG:HG2	1:A:198:LEU:HG	1.94	0.48
2:C:1079:ILE:HG23	2:C:1079:ILE:O	2.13	0.48
2:C:1129:ASN:OD1	2:C:1177:ARG:NH2	2.34	0.48
2:C:4:SER:HB3	2:C:7:GLU:OE2	2.14	0.48
3:D:1193:TRP:HB2	3:D:1194:ARG:NH1	2.29	0.48
3:D:198:CYS:O	3:D:202:ARG:HG3	2.12	0.48
3:D:318:GLY:O	3:D:320:ASN:N	2.46	0.48
3:D:510:LEU:HD22	3:D:601:ILE:HD11	1.96	0.48
1:G:67:GLU:HG3	1:G:171:LEU:HG	1.94	0.48
1:H:112:ALA:HB2	1:H:128:HIS:HB3	1.94	0.48
1:H:82:LEU:HD22	1:H:173:VAL:HG22	1.94	0.48
2:I:15:PHE:CE1	2:I:1151:LEU:HD13	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:143:ARG:HH21	2:I:512:SER:C	2.15	0.48
3:J:79:LYS:HG3	3:J:80:HIS:N	2.28	0.48
5:L:299:LYS:O	5:L:303:ILE:HG12	2.13	0.48
3:J:291:ILE:HD13	5:L:409:ASN:HB3	1.95	0.48
5:L:555:GLU:OE2	5:L:597:LYS:NZ	2.39	0.48
1:A:283:GLN:O	1:A:315:GLY:HA2	2.14	0.48
2:C:139:ASN:O	2:C:141:THR:N	2.46	0.48
2:C:185:ASP:O	2:C:196:VAL:HA	2.14	0.48
2:C:285:ILE:HD11	2:C:287:VAL:HG12	1.95	0.48
2:C:557:ARG:NH2	2:C:608:ALA:HA	2.28	0.48
2:C:1283:ALA:HB1	3:D:479:GLU:OE2	2.13	0.48
4:E:53:GLU:OE1	4:E:59:ILE:HG13	2.14	0.48
5:F:532:LEU:HD12	5:F:532:LEU:H	1.79	0.48
1:G:105:SER:HB2	1:G:138:ALA:O	2.12	0.48
1:G:91:ARG:HG3	1:G:122:GLU:HB3	1.95	0.48
1:H:179:PRO:HA	1:H:208:ASN:HD21	1.78	0.48
2:I:801:ARG:HD3	2:I:1094:VAL:HA	1.96	0.48
2:I:137:VAL:HA	2:I:141:THR:O	2.13	0.48
2:I:786:GLY:N	2:I:789:THR:OG1	2.46	0.48
3:J:293:ARG:NH1	5:L:104:GLU:OE2	2.46	0.48
3:J:395:LYS:O	3:J:398:LYS:HB3	2.14	0.48
3:J:45:ASN:O	3:J:46:TYR:CD2	2.66	0.48
3:J:613:GLY:O	3:J:617:THR:OG1	2.27	0.48
5:L:456:MET:O	5:L:459:THR:HB	2.13	0.48
1:B:152:TYR:HE1	1:B:176:CYS:HB3	1.79	0.48
2:C:1116:HIS:O	2:C:1119:MET:HB3	2.14	0.48
3:D:905:ARG:HH21	3:D:907:HIS:CB	2.25	0.48
4:E:35:LYS:NZ	4:E:71:GLU:OE2	2.34	0.48
5:F:277:MET:HG3	5:F:362:ASN:HD21	1.77	0.48
5:F:280:VAL:HG22	5:F:347:ILE:HD13	1.94	0.48
2:I:976:ARG:HD2	2:I:989:LEU:HD23	1.95	0.48
3:J:361:LEU:HD22	3:J:365:GLN:HG3	1.94	0.48
1:B:211:ILE:HD11	1:B:215:GLU:OE2	2.13	0.48
1:B:23:HIS:ND1	1:B:206:GLU:HG2	2.28	0.48
2:C:20:GLN:O	2:C:20:GLN:HG3	2.14	0.48
2:C:325:LEU:O	2:C:328:SER:OG	2.31	0.48
2:I:132:ASP:N	2:I:132:ASP:OD1	2.38	0.48
2:I:178:PRO:HB3	2:I:395:TYR:CZ	2.48	0.48
2:I:629:PHE:CE2	2:I:634:VAL:HG11	2.49	0.48
2:I:658:GLN:NE2	2:I:1186:VAL:H	2.11	0.48
3:J:1290:ARG:HG2	3:J:1298:VAL:HG12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:512:GLY:C	5:L:514:ASP:N	2.63	0.48
1:B:206:GLU:OE2	3:D:531:LYS:HE2	2.14	0.48
2:C:40:GLU:O	2:C:73:TYR:OH	2.32	0.48
2:C:42:ASP:OD2	2:C:44:GLU:C	2.51	0.48
2:C:685:MET:SD	2:C:1073:LYS:HG3	2.54	0.48
3:D:36:GLY:HA3	3:D:61:ILE:HG23	1.95	0.48
3:D:9:LYS:HE2	3:D:9:LYS:HB3	1.66	0.48
5:F:483:LEU:N	5:F:483:LEU:HD12	2.22	0.48
5:F:583:THR:HG22	5:F:584:ARG:HG2	1.95	0.48
1:G:153:VAL:N	1:G:175:ALA:O	2.33	0.48
2:I:800:MET:O	2:I:1229:TYR:HA	2.13	0.48
3:J:337:ARG:HH11	3:J:1327:GLU:HA	1.79	0.48
3:J:681:LYS:O	3:J:684:ASP:HB2	2.14	0.48
5:L:276:MET:O	5:L:280:VAL:HG23	2.14	0.48
2:C:1017:GLN:O	2:C:1021:LEU:HG	2.14	0.48
2:C:524:ILE:HD12	2:C:712:SER:HB2	1.94	0.48
3:D:1221:LEU:HD11	3:D:1304:ARG:O	2.14	0.48
3:D:278:ARG:NH1	3:D:295:GLU:OE1	2.39	0.48
3:D:34:SER:HG	3:D:104:HIS:CG	2.29	0.48
3:D:490:ILE:HG12	3:D:491:LEU:HG	1.95	0.48
3:D:720:ASN:OD1	3:D:722:ILE:HG22	2.13	0.48
5:F:561:MET:HG2	5:F:576:VAL:HG22	1.95	0.48
1:G:190:ALA:HB2	1:G:200:LYS:CB	2.32	0.48
2:I:1179:GLY:O	2:I:1181:PRO:HD3	2.13	0.48
2:I:742:TYR:HD2	2:I:743:PRO:HD2	1.78	0.48
3:J:516:ASP:HB3	3:J:573:THR:HG21	1.96	0.48
3:J:708:ASN:OD1	3:J:708:ASN:N	2.46	0.48
3:J:515:ARG:HH21	3:J:717:VAL:HG23	1.79	0.48
3:J:797:THR:O	3:J:801:VAL:HG13	2.12	0.48
2:C:10:ARG:CZ	2:C:697:LYS:HD3	2.44	0.48
2:C:1120:ALA:HB2	2:C:1199:LEU:HG	1.96	0.48
2:C:886:LYS:O	2:C:916:SER:N	2.47	0.48
3:D:244:VAL:HG23	3:D:244:VAL:O	2.14	0.48
3:D:709:ARG:C	3:D:711:GLY:N	2.67	0.48
5:F:114:GLU:HG3	5:F:115:GLY:H	1.78	0.48
3:J:556:GLU:HG2	3:J:558:ASP:HB2	1.96	0.48
5:L:394:TYR:OH	5:L:436:ARG:HD2	2.12	0.48
1:A:61:ILE:HG23	1:A:142:MET:CB	2.39	0.48
1:A:166:ARG:O	1:A:166:ARG:HD2	2.14	0.48
2:C:1065:LYS:HE2	3:D:462:ASP:O	2.14	0.48
2:C:42:ASP:CG	2:C:44:GLU:HG2	2.33	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:580:TRP:O	3:D:580:TRP:CG	2.67	0.48
5:F:489:MET:O	5:F:491:GLU:HB3	2.14	0.48
1:G:10:LYS:HE2	1:H:229:GLU:OE1	2.14	0.48
1:G:64:VAL:CG1	1:G:69:SER:HB2	2.44	0.48
2:I:195:PHE:CD1	2:I:205:PRO:HA	2.49	0.48
2:I:685:MET:HA	2:I:688:GLN:HE21	1.78	0.48
3:J:113:HIS:CE1	3:J:115:TRP:HB2	2.49	0.48
3:J:186:GLN:HG3	3:J:238:ILE:HB	1.96	0.48
5:L:137:TYR:CE2	5:L:273:MET:HG2	2.49	0.48
1:B:108:GLY:O	1:B:133:LEU:HB2	2.13	0.48
2:C:108:GLU:OE1	2:C:108:GLU:HA	2.13	0.48
2:C:10:ARG:NH1	2:C:697:LYS:HD3	2.29	0.48
2:C:805:MET:O	2:C:805:MET:HG3	2.14	0.48
1:B:196:THR:HG23	3:D:443:GLU:CD	2.35	0.48
3:D:706:VAL:HG12	3:D:715:LYS:CB	2.44	0.48
5:F:580:PHE:C	5:F:582:VAL:H	2.17	0.48
5:F:600:HIS:CG	5:F:601:PRO:HD2	2.48	0.48
2:I:496:LYS:HB3	2:I:497:PRO:HD3	1.96	0.48
3:J:1265:THR:HG22	3:J:1277:GLY:HA2	1.96	0.48
3:J:161:THR:HG22	3:J:164:GLN:CD	2.34	0.48
2:I:1242:LYS:HD2	3:J:465:GLN:OE1	2.14	0.48
3:J:544:LEU:O	3:J:575:GLY:N	2.47	0.48
5:L:157:ARG:NH2	5:L:159:SER:OG	2.47	0.48
5:L:343:LYS:HA	5:L:346:GLN:HB3	1.95	0.48
2:C:1070:HIS:CD2	2:C:1111:GLN:HA	2.48	0.47
2:C:1176:LEU:HD23	2:C:1176:LEU:HA	1.38	0.47
3:D:1138:LEU:HB3	3:D:1139:PRO:HD3	1.95	0.47
3:D:1206:ARG:NH2	3:D:1223:LEU:O	2.47	0.47
2:C:1341:ASP:HB3	3:D:18:ASP:OD2	2.14	0.47
3:D:695:LYS:HA	3:D:695:LYS:HD3	1.44	0.47
5:F:453:PRO:O	5:F:456:MET:HB2	2.14	0.47
2:I:169:LYS:O	2:I:170:VAL:HG22	2.14	0.47
2:I:213:LEU:HD23	2:I:213:LEU:HA	1.56	0.47
2:I:4:SER:H	2:I:7:GLU:CD	2.17	0.47
3:J:239:LEU:HA	3:J:239:LEU:HD23	1.60	0.47
3:J:742:GLY:O	3:J:762:ASN:HB3	2.14	0.47
3:J:77:ARG:HB3	3:J:80:HIS:ND1	2.28	0.47
5:L:598:LEU:O	5:L:604:SER:OG	2.31	0.47
2:C:123:TYR:HB3	5:F:472:GLN:HB2	1.96	0.47
2:C:587:LEU:HD23	2:C:587:LEU:HA	1.73	0.47
2:C:590:PRO:HG3	2:C:605:TYR:CE2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:41:GLN:NE2	2:C:73:TYR:O	2.46	0.47
2:C:4:SER:HB3	2:C:7:GLU:CD	2.34	0.47
3:D:1295:ASN:HB2	3:D:1298:VAL:HB	1.94	0.47
4:E:25:ARG:HD3	4:E:64:LEU:HD13	1.96	0.47
2:I:123:TYR:OH	2:I:126:GLU:HG3	2.13	0.47
2:I:379:GLU:H	2:I:379:GLU:CD	2.15	0.47
2:I:151:ARG:HE	2:I:445:ILE:HD11	1.78	0.47
2:I:494:ASN:HD22	2:I:497:PRO:CD	2.28	0.47
2:I:658:GLN:O	2:I:660:VAL:N	2.47	0.47
3:J:317:THR:HG23	3:J:320:ASN:HB3	1.95	0.47
3:J:598:LYS:N	3:J:728:SER:O	2.33	0.47
2:C:29:SER:O	2:C:30:ILE:C	2.52	0.47
2:C:619:ALA:HA	2:C:654:ASP:HB2	1.96	0.47
2:C:811:ASN:HA	2:C:815:SER:HB2	1.94	0.47
1:G:19:VAL:HG12	1:G:20:SER:N	2.27	0.47
2:I:1085:MET:CB	2:I:1093:PRO:HB3	2.43	0.47
2:I:367:TYR:HD1	2:I:384:LEU:HD22	1.78	0.47
2:I:736:VAL:HG23	2:I:748:ILE:HA	1.96	0.47
3:J:1356:LEU:O	3:J:1366:HIS:CE1	2.67	0.47
5:L:515:GLU:HG2	5:L:516:ASP:N	2.29	0.47
1:B:101:THR:HG22	1:B:116:THR:HB	1.97	0.47
2:C:302:ILE:O	2:C:330:HIS:NE2	2.36	0.47
2:C:486:THR:HG23	2:C:487:LEU:H	1.79	0.47
2:C:593:LYS:HG3	2:C:595:THR:HG23	1.96	0.47
3:D:246:PRO:HA	3:D:247:PRO:HD3	1.73	0.47
2:I:517:GLN:CD	2:I:688:GLN:HA	2.34	0.47
2:I:785:ASP:HB3	2:I:789:THR:OG1	2.14	0.47
3:J:1226:VAL:O	3:J:1230:THR:HG22	2.14	0.47
2:I:1331:ARG:HG2	3:J:33:TRP:CZ3	2.49	0.47
3:J:770:LEU:O	3:J:774:ILE:HG13	2.15	0.47
2:C:129:LEU:HA	2:C:129:LEU:HD23	1.64	0.47
2:C:225:PHE:CE2	2:C:347:ILE:HB	2.49	0.47
2:C:623:LEU:HA	2:C:630:VAL:HG23	1.96	0.47
2:C:681:MET:O	2:C:685:MET:HE2	2.15	0.47
2:C:821:ARG:HG3	2:C:825:GLU:OE1	2.15	0.47
1:G:97:GLU:HB3	1:G:147:GLN:HA	1.97	0.47
1:G:29:GLU:HB3	1:G:30:PRO:HD3	1.96	0.47
1:H:197:ASP:C	1:H:198:LEU:HD22	2.34	0.47
2:I:1119:MET:HB2	2:I:1228:GLY:HA2	1.96	0.47
2:I:74:ARG:NH1	2:I:121:GLU:OE2	2.46	0.47
2:I:692:THR:OG1	2:I:693:LEU:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:720:ARG:HH21	2:I:736:VAL:HG11	1.79	0.47
3:J:299:LEU:O	3:J:300:GLN:C	2.53	0.47
3:J:658:GLU:O	3:J:661:VAL:HG13	2.14	0.47
3:J:884:SER:OG	3:J:885:VAL:N	2.48	0.47
1:A:233:ASP:O	1:A:234:LEU:HD22	2.14	0.47
1:A:307:LEU:HA	1:A:307:LEU:HD23	1.53	0.47
2:C:1142:ARG:CD	2:C:1161:LEU:HD11	2.31	0.47
2:C:1252:SER:HB3	2:C:1255:THR:O	2.14	0.47
2:C:250:THR:HA	2:C:268:ARG:HA	1.97	0.47
2:C:650:VAL:HG23	2:C:650:VAL:O	2.14	0.47
3:D:1146:GLU:HA	3:D:1146:GLU:OE2	2.15	0.47
3:D:1221:LEU:O	3:D:1221:LEU:HD22	2.15	0.47
3:D:268:LEU:HD23	3:D:268:LEU:HA	1.62	0.47
3:D:40:LYS:HB2	3:D:54:ASP:O	2.14	0.47
3:D:739:GLN:OE1	3:D:744:ARG:NE	2.48	0.47
3:D:744:ARG:HG3	3:D:744:ARG:O	2.15	0.47
5:F:112:THR:OG1	5:F:114:GLU:HG3	2.14	0.47
2:I:13:LYS:O	2:I:1183:ALA:N	2.31	0.47
2:I:197:ARG:NH1	2:I:201:ARG:O	2.45	0.47
2:I:557:ARG:NE	2:I:587:LEU:O	2.41	0.47
2:I:902:LEU:HD21	5:L:611:LEU:HG	1.95	0.47
2:I:985:GLU:HB3	2:I:988:LYS:HB2	1.97	0.47
3:J:1286:LYS:HD2	3:J:1290:ARG:HH21	1.78	0.47
1:A:246:LYS:HB2	1:A:248:GLU:OE2	2.15	0.47
2:C:629:PHE:CE2	2:C:650:VAL:HG21	2.50	0.47
2:C:870:ILE:HG22	2:C:944:ARG:NH1	2.29	0.47
3:D:35:PHE:CE1	3:D:101:ARG:HD3	2.50	0.47
5:F:372:ALA:O	5:F:376:LYS:HG3	2.14	0.47
2:I:835:GLU:OE2	2:I:1051:LYS:HD3	2.14	0.47
2:I:870:ILE:HG22	2:I:944:ARG:NH1	2.29	0.47
3:D:1181:ASP:CB	3:J:202:ARG:HD3	2.45	0.47
5:L:390:ILE:HD11	5:L:432:THR:HG23	1.97	0.47
5:L:463:LEU:HA	5:L:463:LEU:HD23	1.68	0.47
5:L:489:MET:CE	5:L:493:LYS:HD2	2.44	0.47
5:L:603:ARG:CZ	5:L:603:ARG:HA	2.44	0.47
2:C:1120:ALA:HB1	2:C:1198:LEU:HD13	1.96	0.47
3:D:1175:LEU:O	3:D:1187:GLU:HA	2.14	0.47
3:D:238:ILE:HG23	3:D:238:ILE:HD12	1.67	0.47
3:D:273:ILE:O	3:D:274:ASN:C	2.52	0.47
3:D:611:ILE:HG22	3:D:612:LEU:HD12	1.96	0.47
3:D:648:GLU:OE2	3:D:649:LYS:HE2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:163:THR:O	5:F:260:ARG:NH2	2.48	0.47
5:F:276:MET:O	5:F:279:ARG:HB2	2.14	0.47
5:F:513:ASP:C	5:F:515:GLU:H	2.17	0.47
1:G:37:HIS:HB3	1:H:45:ARG:NH1	2.30	0.47
2:I:242:VAL:HG21	2:I:245:ARG:NH1	2.30	0.47
2:I:344:GLY:O	2:I:346:TYR:CG	2.68	0.47
2:I:528:ARG:NH2	2:I:575:LEU:HD23	2.29	0.47
2:I:985:GLU:HG2	2:I:988:LYS:HD2	1.97	0.47
3:J:895:CYS:O	3:J:898:CYS:N	2.43	0.47
1:A:102:LEU:HD22	1:A:103:ASN:N	2.30	0.47
1:A:27:THR:HA	1:A:201:LEU:O	2.14	0.47
1:A:284:ARG:HG3	1:A:288:GLU:OE1	2.15	0.47
2:C:1023:HIS:O	2:C:1027:LYS:HG2	2.14	0.47
3:D:46:TYR:CD1	5:F:452:ILE:HG22	2.50	0.47
5:F:379:MET:HG2	5:F:416:VAL:CG2	2.45	0.47
5:F:548:LEU:O	5:F:556:ALA:HB2	2.14	0.47
2:I:1134:GLN:C	2:I:1135:GLN:HG2	2.35	0.47
2:I:221:LEU:HD23	2:I:221:LEU:HA	1.63	0.47
2:I:854:ILE:O	2:I:857:VAL:HG22	2.15	0.47
1:G:66:HIS:HE1	2:I:874:GLY:HA2	1.76	0.47
3:J:1280:VAL:HG11	3:J:1304:ARG:CZ	2.44	0.47
3:J:128:LEU:HA	3:J:192:MET:HE1	1.96	0.47
3:J:425:ARG:HD2	3:J:459:ALA:HB2	1.95	0.47
3:J:495:ASN:O	3:J:497:GLU:N	2.48	0.47
3:J:647:PRO:HG3	3:J:697:MET:CB	2.40	0.47
1:A:28:LEU:N	1:A:28:LEU:CD1	2.72	0.47
1:B:109:PRO:HA	1:B:132:HIS:HA	1.97	0.47
2:C:1331:ARG:HG2	3:D:33:TRP:CH2	2.50	0.47
3:D:279:LEU:C	3:D:279:LEU:HD23	2.35	0.47
3:D:810:THR:HG21	3:D:893:GLY:HA3	1.97	0.47
3:J:287:ALA:HB1	3:J:288:PRO:HD2	1.95	0.47
3:J:316:ILE:HA	3:J:323:PRO:HA	1.96	0.47
2:I:1309:VAL:HA	3:J:383:GLY:HA3	1.97	0.47
3:J:915:ILE:O	3:J:919:ALA:N	2.45	0.47
2:C:496:LYS:HE3	2:C:497:PRO:HD3	1.97	0.47
2:C:53:PHE:CD1	2:C:468:LEU:HD11	2.49	0.47
2:C:696:ASP:O	2:C:697:LYS:HB3	2.15	0.47
3:D:109:SER:O	3:D:110:PRO:C	2.52	0.47
3:D:238:ILE:HA	3:D:238:ILE:HD13	1.38	0.47
3:D:37:GLU:O	3:D:61:ILE:HD11	2.14	0.47
1:H:18:GLN:NE2	1:H:20:SER:O	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:185:ASP:HB2	2:I:197:ARG:O	2.15	0.47
2:I:62:TYR:O	2:I:64:GLY:N	2.47	0.47
2:I:753:LEU:HD21	2:I:784:ALA:CB	2.45	0.47
2:I:81:ASP:O	2:I:85:CYS:HB2	2.15	0.47
5:L:306:PHE:HE1	5:L:315:TRP:CH2	2.33	0.47
1:A:12:ARG:NH1	1:A:13:LEU:HD21	2.29	0.46
2:C:28:LEU:HA	2:C:28:LEU:HD23	1.40	0.46
2:C:356:THR:HG21	2:C:362:ALA:HA	1.97	0.46
3:D:1237:VAL:CG1	3:D:1253:ILE:HD13	2.46	0.46
3:D:768:ASN:OD1	3:D:771:GLN:OE1	2.33	0.46
1:A:316:MET:CB	5:F:600:HIS:CE1	2.98	0.46
2:I:1059:ARG:O	2:I:1234:LYS:NZ	2.43	0.46
2:I:397:LEU:HB3	2:I:401:GLY:HA3	1.97	0.46
2:I:44:GLU:HA	2:I:54:ARG:NH1	2.30	0.46
3:J:850:LYS:HB3	3:J:851:PRO:HD2	1.98	0.46
1:B:104:LYS:HG2	1:B:114:ASP:CG	2.36	0.46
1:B:188:GLU:O	1:B:200:LYS:N	2.29	0.46
2:C:1131:MET:HE2	2:C:1141:LEU:HD12	1.97	0.46
2:C:169:LYS:O	2:C:170:VAL:HG22	2.15	0.46
2:C:239:MET:O	2:C:284:LEU:HD12	2.15	0.46
2:C:300:ASP:OD1	2:C:313:ALA:N	2.48	0.46
2:C:397:LEU:HB3	2:C:401:GLY:HA3	1.98	0.46
2:C:157:PHE:CZ	2:C:431:LYS:HG2	2.50	0.46
2:C:484:LEU:HD12	2:C:485:ASP:H	1.80	0.46
3:D:112:ALA:HA	3:D:238:ILE:CD1	2.46	0.46
3:D:318:GLY:C	3:D:320:ASN:H	2.18	0.46
3:D:519:ASN:OD1	3:D:709:ARG:NH1	2.48	0.46
1:H:110:VAL:HG23	1:H:131:CYS:O	2.15	0.46
1:H:155:ALA:N	1:H:174:ASP:OD1	2.43	0.46
2:I:802:VAL:HG21	2:I:1098:LEU:HD22	1.96	0.46
2:I:409:LEU:HD23	2:I:409:LEU:HA	1.57	0.46
3:J:1234:VAL:HG23	3:J:1235:ASN:N	2.30	0.46
3:J:1280:VAL:HG21	3:J:1304:ARG:HE	1.80	0.46
2:I:1289:GLU:OE2	3:J:473:THR:HG22	2.16	0.46
3:J:654:ILE:O	3:J:658:GLU:HB2	2.15	0.46
3:J:804:ALA:O	3:J:806:ASP:N	2.48	0.46
5:L:305:LEU:HD13	5:L:315:TRP:HA	1.96	0.46
1:A:14:VAL:HG22	1:A:15:ASP:N	2.26	0.46
1:A:179:PRO:HB3	1:A:211:ILE:HB	1.96	0.46
1:A:255:ARG:HB2	1:A:278:ILE:HD12	1.98	0.46
1:A:16:ILE:CG2	1:A:26:VAL:HG12	2.37	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:7:GLU:HG3	1:B:150:ARG:NE	2.26	0.46
1:A:50:SER:HB2	1:B:8:PHE:HZ	1.79	0.46
2:C:1009:ASN:O	2:C:1012:GLU:HB3	2.16	0.46
2:C:1136:GLN:NE2	2:C:1140:LYS:NZ	2.64	0.46
1:H:220:ALA:HA	1:H:223:ILE:HD12	1.97	0.46
2:I:517:GLN:O	2:I:517:GLN:HG2	2.14	0.46
2:I:617:ALA:N	2:I:652:TYR:O	2.30	0.46
2:I:657:THR:HG23	2:I:658:GLN:HG3	1.97	0.46
2:I:840:SER:HB2	2:I:850:ILE:HD11	1.97	0.46
2:I:891:GLY:C	2:I:892:GLU:HG3	2.35	0.46
3:J:117:LEU:HA	3:J:117:LEU:HD12	1.44	0.46
3:J:1280:VAL:HG11	3:J:1304:ARG:NE	2.30	0.46
3:J:521:LYS:HE3	3:J:541:LEU:O	2.15	0.46
3:J:647:PRO:CD	3:J:697:MET:HB3	2.45	0.46
5:L:134:VAL:HG21	5:L:266:PHE:HE1	1.80	0.46
1:A:77:ASP:O	1:A:80:GLU:N	2.48	0.46
1:B:41:ASN:ND2	2:C:1217:THR:HA	2.31	0.46
2:C:128:PRO:HG2	2:C:506:PHE:CD1	2.50	0.46
2:C:705:GLU:HB2	2:C:794:LEU:N	2.27	0.46
2:C:953:LEU:HD12	2:C:953:LEU:HA	1.52	0.46
3:D:45:ASN:O	3:D:46:TYR:CB	2.63	0.46
1:G:166:ARG:N	1:G:167:PRO:HD2	2.30	0.46
1:G:98:VAL:HG22	1:G:99:ILE:H	1.79	0.46
2:I:1131:MET:CE	2:I:1141:LEU:HD12	2.46	0.46
2:I:1192:GLU:O	2:I:1196:LYS:HG2	2.14	0.46
2:I:607:SER:OG	2:I:609:ILE:HG13	2.15	0.46
2:I:653:MET:HG2	2:I:654:ASP:N	2.30	0.46
2:I:830:THR:HG22	2:I:1058:ARG:O	2.15	0.46
3:J:746:LEU:CD2	3:J:758:PRO:HG3	2.45	0.46
5:L:296:LYS:HD3	5:L:296:LYS:HA	1.71	0.46
1:B:118:ASP:HB2	1:B:121:VAL:CG2	2.46	0.46
2:C:131:THR:HG21	2:C:135:THR:OG1	2.15	0.46
2:C:247:ARG:HB2	2:C:274:ILE:CD1	2.45	0.46
2:C:262:TYR:HE1	2:C:280:ASP:OD2	1.98	0.46
2:C:976:ARG:HD2	2:C:989:LEU:HD23	1.98	0.46
3:D:721:SER:HA	3:D:724:MET:CE	2.45	0.46
5:F:253:SER:O	5:F:257:LYS:N	2.47	0.46
5:F:466:ILE:HG22	5:F:470:MET:HG3	1.97	0.46
1:H:22:THR:OG1	1:H:207:THR:O	2.33	0.46
3:J:914:ALA:O	3:J:918:ILE:HG23	2.15	0.46
5:L:316:PHE:O	5:L:320:ILE:HG13	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:166:ARG:N	1:A:167:PRO:HD2	2.30	0.46
1:A:47:LEU:O	1:A:180:VAL:HG21	2.15	0.46
2:C:1164:PHE:O	2:C:1168:GLU:HB2	2.14	0.46
2:C:660:VAL:HG13	2:C:661:VAL:HG13	1.98	0.46
2:C:704:MET:O	2:C:707:ALA:N	2.48	0.46
2:C:4:SER:O	2:C:7:GLU:HB2	2.16	0.46
2:C:911:SER:OG	2:C:913:VAL:HG12	2.16	0.46
3:D:377:PHE:O	3:D:378:LYS:C	2.54	0.46
5:F:396:ASN:C	5:F:398:GLY:H	2.19	0.46
1:H:44:ARG:HG2	1:H:183:ILE:HD13	1.97	0.46
2:I:1273:MET:HA	2:I:1276:TRP:CE3	2.50	0.46
2:I:183:TRP:HB2	2:I:199:ASP:CA	2.39	0.46
2:I:27:LEU:HG	2:I:711:ASP:OD2	2.16	0.46
2:I:571:LEU:HD23	2:I:571:LEU:HA	1.56	0.46
2:I:796:LEU:H	2:I:796:LEU:HD12	1.81	0.46
3:J:16:GLU:HB3	3:J:17:PHE:HD2	1.79	0.46
3:J:24:LEU:HD23	3:J:232:ASN:ND2	2.31	0.46
3:J:282:LEU:HA	3:J:282:LEU:HD23	1.71	0.46
3:J:905:ARG:NH1	3:J:910:ASN:ND2	2.59	0.46
5:L:315:TRP:O	5:L:319:ALA:HB3	2.16	0.46
2:C:960:LEU:HB3	2:C:1025:PHE:CE2	2.50	0.46
2:C:1174:GLU:OE2	2:C:1177:ARG:NH1	2.48	0.46
2:C:171:LEU:HA	2:C:171:LEU:HD23	1.68	0.46
2:C:564:PRO:HD2	2:C:572:ILE:HB	1.98	0.46
1:A:152:TYR:CE1	2:C:824:GLN:HG2	2.51	0.46
3:D:1167:LYS:HZ3	3:D:1170:LYS:HB2	1.79	0.46
3:D:1251:LYS:O	3:D:1254:GLU:N	2.49	0.46
3:D:614:LEU:O	3:D:617:THR:N	2.49	0.46
3:D:620:PHE:O	3:D:624:ILE:HG13	2.16	0.46
3:D:812:ASP:HB2	3:D:911:LYS:NZ	2.30	0.46
1:G:58:GLU:OE1	1:G:145:LYS:HD2	2.16	0.46
2:I:1238:LEU:N	2:I:1238:LEU:HD12	2.28	0.46
2:I:468:LEU:HD23	2:I:468:LEU:HA	1.40	0.46
2:I:59:ILE:HG23	2:I:476:LYS:HE3	1.98	0.46
2:I:593:LYS:HA	2:I:652:TYR:CD2	2.51	0.46
2:I:796:LEU:O	2:I:1233:LEU:HD12	2.16	0.46
3:J:885:VAL:O	3:J:1258:ARG:HD2	2.14	0.46
3:D:1181:ASP:HB2	3:J:202:ARG:HD3	1.97	0.46
3:J:190:LYS:HD3	3:J:235:GLU:HG2	1.96	0.46
3:J:377:PHE:O	3:J:378:LYS:C	2.54	0.46
3:J:544:LEU:HD12	3:J:544:LEU:HA	1.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:105:MET:HE1	5:L:385:ARG:HG2	1.97	0.46
2:C:163:LYS:HB3	2:C:163:LYS:HE3	1.85	0.46
2:C:1332:SER:OG	3:D:327:LEU:HD13	2.15	0.46
3:D:37:GLU:HA	3:D:104:HIS:CE1	2.50	0.46
3:D:722:ILE:HD13	3:D:722:ILE:HG21	1.46	0.46
3:D:846:GLU:HA	3:D:860:ARG:CD	2.45	0.46
2:I:832:HIS:CE1	2:I:1058:ARG:HD2	2.51	0.46
2:I:1101:LEU:HA	2:I:1101:LEU:HD23	1.65	0.46
2:I:1157:GLN:O	2:I:1158:LYS:HG2	2.16	0.46
2:I:395:TYR:HE2	2:I:397:LEU:HD11	1.81	0.46
3:J:707:ILE:HD11	3:J:716:GLN:HG2	1.98	0.46
5:L:515:GLU:HG2	5:L:516:ASP:H	1.81	0.46
1:A:322:PRO:HA	1:A:323:PRO:HD3	1.77	0.46
1:A:82:LEU:HD23	1:A:82:LEU:HA	1.58	0.46
1:A:90:VAL:HG22	1:A:91:ARG:N	2.30	0.46
2:C:34:SER:OG	2:C:457:GLY:N	2.44	0.46
2:C:958:LYS:O	2:C:961:SER:OG	2.30	0.46
3:D:1240:VAL:O	3:D:1244:GLN:HG2	2.16	0.46
4:E:66:VAL:HG22	4:E:69:ARG:HH21	1.81	0.46
5:F:384:LEU:HD22	5:F:409:ASN:ND2	2.31	0.46
5:F:524:GLU:HG3	5:F:524:GLU:O	2.16	0.46
1:G:29:GLU:O	1:G:199:ASP:O	2.34	0.46
1:H:88:LEU:HA	1:H:88:LEU:HD12	1.72	0.46
2:I:367:TYR:CE1	2:I:371:ARG:HD2	2.51	0.46
2:I:756:TYR:H	2:I:756:TYR:HD1	1.61	0.46
3:J:112:ALA:HA	3:J:238:ILE:CD1	2.46	0.46
2:I:810:TYR:CE2	3:J:359:PRO:HG2	2.50	0.46
3:J:474:LEU:HA	3:J:477:GLN:HG3	1.97	0.46
3:J:740:LEU:HD12	3:J:740:LEU:HA	1.54	0.46
3:J:827:GLU:O	3:J:829:GLY:N	2.34	0.46
5:L:139:GLU:CG	5:L:351:THR:HA	2.44	0.46
1:A:181:GLU:HB3	1:A:206:GLU:HG3	1.98	0.46
1:A:60:GLU:OE1	1:A:143:ARG:NE	2.38	0.46
2:C:525:THR:HG21	2:C:687:ARG:CD	2.42	0.46
3:D:211:GLU:OE2	3:D:214:ARG:NH1	2.48	0.46
3:D:441:LEU:HD13	3:D:441:LEU:HA	1.63	0.46
3:D:362:ARG:HA	3:D:626:TYR:OH	2.15	0.46
2:I:421:SER:O	2:I:424:ASP:N	2.47	0.46
3:J:474:LEU:HD12	3:J:477:GLN:HE21	1.81	0.46
3:J:865:HIS:ND1	3:J:867:GLN:HB2	2.31	0.46
5:L:119:ILE:O	5:L:122:ARG:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:75:GLN:HG3	1:A:76:GLU:OE2	2.16	0.45
2:C:864:LYS:HZ3	2:C:881:ASP:CG	2.20	0.45
2:C:896:THR:HB	2:C:897:PRO:HD2	1.96	0.45
3:D:615:LYS:HB2	3:D:616:PRO:HD3	1.98	0.45
3:D:859:PRO:HG2	3:D:862:THR:HG21	1.98	0.45
4:E:40:PRO:O	4:E:52:ARG:NH2	2.49	0.45
1:G:187:VAL:HG22	1:G:201:LEU:HD13	1.98	0.45
1:H:99:ILE:HA	1:H:144:ILE:O	2.17	0.45
2:I:28:LEU:HD21	2:I:524:ILE:HG13	1.97	0.45
2:I:886:LYS:O	2:I:916:SER:N	2.48	0.45
3:J:899:TYR:O	3:J:1251:LYS:HD3	2.16	0.45
3:J:886:VAL:HA	3:J:1258:ARG:HB2	1.98	0.45
3:J:1297:LYS:NZ	3:J:1299:GLY:HA3	2.30	0.45
2:I:1291:LEU:HD21	3:J:1351:VAL:HG13	1.98	0.45
3:J:147:ILE:HD11	3:J:179:LYS:NZ	2.31	0.45
3:J:165:TYR:CE2	3:J:169:LEU:HD12	2.51	0.45
4:K:26:ARG:NH2	4:K:36:ASP:O	2.49	0.45
5:L:399:LEU:HA	5:L:399:LEU:HD12	1.63	0.45
5:L:532:LEU:H	5:L:532:LEU:HD12	1.81	0.45
2:C:120:GLN:CG	2:C:121:GLU:HG3	2.36	0.45
2:C:273:HIS:HA	2:C:276:GLN:OE1	2.15	0.45
2:C:448:LEU:HA	2:C:448:LEU:HD23	1.75	0.45
2:C:883:LEU:HA	2:C:883:LEU:HD23	1.73	0.45
3:D:796:LEU:HG	3:D:800:LEU:HD22	1.99	0.45
1:H:149:GLY:HA3	1:H:177:TYR:CD2	2.51	0.45
2:I:1012:GLU:HG3	2:I:1016:GLU:OE2	2.16	0.45
2:I:97:ARG:HB3	2:I:121:GLU:CB	2.46	0.45
2:I:598:VAL:HG13	2:I:628:HIS:CE1	2.51	0.45
2:I:972:PHE:CE2	2:I:998:LEU:HD11	2.50	0.45
3:J:349:TYR:CE1	3:J:472:LEU:HD11	2.51	0.45
3:J:381:ILE:HG21	3:J:401:VAL:HG11	1.97	0.45
3:J:97:VAL:HG12	3:J:101:ARG:HG3	1.98	0.45
5:L:297:MET:HG2	5:L:298:PRO:N	2.31	0.45
2:C:1119:MET:HB2	2:C:1228:GLY:HA2	1.98	0.45
2:C:178:PRO:HB3	2:C:395:TYR:CZ	2.52	0.45
2:C:699:LEU:HA	2:C:699:LEU:HD23	1.40	0.45
2:C:74:ARG:O	2:C:96:LEU:HD12	2.16	0.45
1:A:261:GLU:OE2	2:C:859:GLU:HB2	2.17	0.45
3:D:1258:ARG:NH2	3:D:1281:GLU:OE1	2.48	0.45
3:D:112:ALA:HB3	3:D:300:GLN:NE2	2.31	0.45
3:D:612:LEU:HB3	3:D:616:PRO:HG2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:689:ALA:O	3:D:692:ARG:HB2	2.16	0.45
3:D:875:ASN:OD1	3:D:875:ASN:N	2.49	0.45
2:I:504:GLU:OE2	2:I:508:SER:HB2	2.16	0.45
2:I:538:LEU:HA	2:I:542:ARG:NE	2.31	0.45
2:I:758:ARG:HH22	2:I:761:GLN:HE21	1.63	0.45
3:J:275:ARG:HD3	3:J:298:MET:HB3	1.97	0.45
1:B:152:TYR:CE1	1:B:176:CYS:HB3	2.52	0.45
2:C:400:VAL:H	2:C:400:VAL:HG23	1.46	0.45
2:C:720:ARG:NH2	2:C:736:VAL:HG21	2.31	0.45
3:D:1356:LEU:HA	3:D:1356:LEU:HD23	1.40	0.45
3:D:184:ALA:O	3:D:187:ALA:HB3	2.17	0.45
3:D:317:THR:CG2	3:D:320:ASN:HB3	2.42	0.45
3:D:810:THR:HG22	3:D:893:GLY:HA3	1.98	0.45
1:G:226:GLU:CD	1:H:10:LYS:HE2	2.37	0.45
2:I:1159:VAL:HB	2:I:1160:ASP:H	1.58	0.45
2:I:228:VAL:HG22	2:I:245:ARG:HE	1.80	0.45
2:I:397:LEU:H	2:I:397:LEU:HD12	1.81	0.45
2:I:62:TYR:C	2:I:64:GLY:H	2.19	0.45
2:I:798:GLN:OE1	2:I:828:PHE:HD1	1.99	0.45
1:G:152:TYR:CD2	2:I:824:GLN:HG2	2.52	0.45
3:J:1262:ARG:HD2	3:J:1279:GLN:HE22	1.81	0.45
2:I:1281:TYR:OH	3:J:431:ARG:O	2.33	0.45
5:L:143:TYR:OH	5:L:265:GLN:OE1	2.12	0.45
5:L:357:GLN:HG3	5:L:357:GLN:H	1.52	0.45
5:L:470:MET:HA	5:L:473:GLU:HB3	1.98	0.45
5:L:577:GLY:O	5:L:581:ASP:N	2.50	0.45
1:A:224:LEU:C	1:A:224:LEU:HD23	2.36	0.45
1:A:233:ASP:O	1:A:234:LEU:HD13	2.17	0.45
1:B:84:ASN:ND2	1:B:129:VAL:O	2.45	0.45
2:C:1030:GLU:OE1	2:C:1033:ARG:NH2	2.50	0.45
2:C:1160:ASP:CG	2:C:1161:LEU:N	2.67	0.45
2:C:5:TYR:CZ	2:C:776:PRO:HB2	2.51	0.45
2:C:891:GLY:C	2:C:892:GLU:HG3	2.37	0.45
3:D:1140:ARG:NH2	3:D:1144:LEU:HD21	2.31	0.45
3:D:127:LEU:HA	3:D:127:LEU:HD12	1.46	0.45
3:D:282:LEU:HA	3:D:282:LEU:HD23	1.52	0.45
1:H:105:SER:HB3	1:H:137:ASN:O	2.17	0.45
1:H:60:GLU:OE2	1:H:143:ARG:NH1	2.50	0.45
2:I:952:GLN:OE1	2:I:1036:ILE:HG23	2.16	0.45
3:J:585:LYS:HA	3:J:585:LYS:HD3	1.68	0.45
3:J:859:PRO:HG2	3:J:862:THR:HG21	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:L:419:PHE:CD1	5:L:430:TYR:CD2	3.05	0.45
5:L:533:ASP:O	5:L:536:THR:N	2.49	0.45
1:A:197:ASP:O	1:A:198:LEU:HD23	2.17	0.45
2:C:1035:LYS:O	2:C:1038:GLN:HG2	2.17	0.45
2:C:388:LEU:HA	2:C:388:LEU:HD23	1.72	0.45
2:C:5:TYR:HD1	2:C:8:LYS:HD3	1.82	0.45
3:D:285:LEU:N	3:D:285:LEU:HD12	2.32	0.45
3:D:107:LEU:HD22	3:D:299:LEU:HD21	1.98	0.45
3:D:471:PRO:HG2	3:D:471:PRO:O	2.16	0.45
3:D:528:THR:HG22	3:D:532:GLU:CD	2.37	0.45
3:D:846:GLU:HA	3:D:860:ARG:HD3	1.97	0.45
5:F:234:THR:HG21	5:F:248:GLU:OE2	2.16	0.45
5:F:309:ASN:HD21	5:F:312:SER:HB3	1.81	0.45
5:F:311:THR:HG21	5:F:348:GLU:OE2	2.17	0.45
1:G:154:PRO:HB3	2:I:1059:ARG:NH2	2.32	0.45
2:I:1068:GLY:HA3	2:I:1072:ASN:HD21	1.82	0.45
2:I:1212:LEU:O	2:I:1221:PHE:N	2.46	0.45
2:I:697:LYS:HB3	2:I:697:LYS:HE2	1.79	0.45
3:J:799:ARG:HB3	3:J:1309:ILE:HD12	1.98	0.45
3:J:549:LYS:HE2	3:J:571:ASP:OD2	2.17	0.45
5:L:390:ILE:HG21	5:L:390:ILE:HD13	1.74	0.45
2:C:1161:LEU:HD12	2:C:1161:LEU:HA	1.26	0.45
2:C:474:ALA:O	2:C:477:GLU:HB3	2.17	0.45
2:C:606:LEU:HD12	2:C:606:LEU:N	2.32	0.45
3:D:24:LEU:HA	3:D:24:LEU:HD13	1.74	0.45
3:D:605:LEU:HA	3:D:605:LEU:HD23	1.77	0.45
3:D:819:GLY:O	3:D:1227:HIS:HE1	1.99	0.45
5:F:433:TRP:O	5:F:437:GLN:HB3	2.17	0.45
2:I:1077:SER:OG	2:I:1078:LYS:N	2.50	0.45
2:I:511:LEU:HD12	2:I:511:LEU:N	2.32	0.45
2:I:886:LYS:H	2:I:917:SER:HB3	1.82	0.45
2:I:967:LEU:HA	2:I:967:LEU:HD12	1.84	0.45
3:J:31:ARG:NH2	3:J:106:GLU:OE2	2.46	0.45
3:J:215:LYS:O	3:J:218:THR:HG22	2.17	0.45
4:K:36:ASP:HB2	4:K:37:PRO:HD2	1.99	0.45
1:B:9:LEU:HB3	1:B:32:GLU:HG2	1.99	0.45
2:C:1002:LEU:N	2:C:1008:GLN:OE1	2.49	0.45
2:C:145:ILE:CG2	2:C:456:VAL:HG22	2.47	0.45
2:C:224:PHE:CG	2:C:347:ILE:HG13	2.52	0.45
2:C:22:LEU:HD22	2:C:22:LEU:HA	1.82	0.45
3:D:154:LEU:HD12	3:D:154:LEU:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:532:GLU:HA	3:D:535:ARG:HB3	1.98	0.45
2:C:1223:ARG:NH2	3:D:719:PHE:O	2.50	0.45
3:D:740:LEU:HD12	3:D:740:LEU:HA	1.47	0.45
3:D:796:LEU:HA	3:D:796:LEU:HD12	1.61	0.45
3:D:836:ARG:HG3	3:D:869:CYS:HB3	1.98	0.45
5:F:364:ARG:HA	5:F:367:ILE:HD12	1.97	0.45
5:F:561:MET:HE3	5:F:561:MET:HB2	1.92	0.45
1:H:82:LEU:HD22	1:H:173:VAL:CG2	2.47	0.45
2:I:852:ALA:HB2	2:I:869:GLY:HA2	1.98	0.45
3:J:450:HIS:HE1	3:J:452:LEU:HG	1.82	0.45
3:J:701:LEU:HA	3:J:701:LEU:HD22	1.57	0.45
3:J:93:THR:HG22	3:J:94:GLN:N	2.31	0.45
5:L:96:ASP:O	5:L:98:VAL:N	2.49	0.45
2:C:1246:ARG:CZ	2:C:1249:GLY:H	2.30	0.45
2:C:159:SER:O	2:C:160:ASP:HB2	2.16	0.45
2:C:445:ILE:HG22	2:C:446:ASP:OD1	2.16	0.45
2:C:60:GLN:HG2	2:C:60:GLN:H	1.31	0.45
2:C:697:LYS:HB3	2:C:697:LYS:HE2	1.40	0.45
3:D:820:ILE:HG22	3:D:1227:HIS:ND1	2.32	0.45
3:D:508:LEU:HA	3:D:508:LEU:HD12	1.62	0.45
3:D:544:LEU:HD12	3:D:544:LEU:HA	1.57	0.45
3:D:622:ASP:HB3	3:D:626:TYR:CE2	2.51	0.45
3:D:630:ALA:O	3:D:633:ALA:HB3	2.17	0.45
5:F:502:LYS:HE3	5:F:502:LYS:HB2	1.40	0.45
5:F:511:ILE:HG23	5:F:511:ILE:O	2.17	0.45
1:G:89:ALA:HB3	1:G:124:VAL:HG12	1.99	0.45
1:G:110:VAL:CG2	1:G:133:LEU:HD23	2.47	0.45
1:G:135:ASP:OD1	1:G:136:GLU:N	2.50	0.45
1:G:41:ASN:HD22	1:H:41:ASN:ND2	2.09	0.45
1:G:68:TYR:CE1	2:I:929:ILE:HG21	2.50	0.45
2:I:968:GLU:CG	2:I:1018:TYR:HE1	2.29	0.45
3:J:1337:VAL:HG23	3:J:1338:ALA:N	2.32	0.45
4:K:26:ARG:NE	4:K:53:GLU:OE1	2.49	0.45
5:L:507:MET:HG2	5:L:520:GLY:CA	2.47	0.45
1:A:132:HIS:N	1:A:132:HIS:CD2	2.84	0.45
2:C:104:ILE:HD12	2:C:115:LYS:O	2.16	0.45
2:C:325:LEU:O	2:C:330:HIS:HB2	2.17	0.45
2:C:447:HIS:CE1	2:C:553:THR:HG21	2.51	0.45
2:C:850:ILE:HD12	2:C:850:ILE:HG23	1.54	0.45
3:D:707:ILE:N	3:D:714:GLU:O	2.48	0.45
1:G:23:HIS:ND1	1:G:206:GLU:HG2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:57:THR:HG22	1:G:58:GLU:HG2	1.99	0.45
1:G:37:HIS:HB3	1:H:45:ARG:NH2	2.31	0.45
2:I:1164:PHE:N	2:I:1168:GLU:OE1	2.49	0.45
3:J:438:GLU:OE2	3:J:481:ARG:NH2	2.34	0.45
1:A:89:ALA:HB3	1:A:125:LYS:HD2	1.99	0.44
1:B:100:LEU:HG	1:B:118:ASP:OD2	2.18	0.44
2:C:102:LEU:O	2:C:116:ASP:HA	2.17	0.44
2:C:230:PHE:O	2:C:332:ARG:HA	2.17	0.44
3:D:1165:PHE:HD2	3:D:1173:ARG:CD	2.30	0.44
3:D:1278:GLU:HA	3:D:1278:GLU:OE1	2.16	0.44
3:D:385:LEU:HD23	3:D:385:LEU:HA	1.78	0.44
1:B:196:THR:HG23	3:D:443:GLU:CG	2.47	0.44
3:D:45:ASN:O	3:D:46:TYR:CD2	2.70	0.44
3:D:474:LEU:HD23	4:E:28:ARG:HG2	1.99	0.44
3:D:704:GLU:O	3:D:706:VAL:HG22	2.16	0.44
3:D:854:ALA:HB2	3:J:1372:ARG:HE	1.81	0.44
3:D:907:HIS:CE1	4:E:11:GLU:OE2	2.70	0.44
1:H:65:LEU:O	1:H:171:LEU:HD11	2.18	0.44
3:J:121:PRO:O	3:J:122:SER:C	2.52	0.44
3:J:1266:ILE:HG13	3:J:1266:ILE:H	1.42	0.44
3:J:1280:VAL:CG1	3:J:1304:ARG:HE	2.30	0.44
3:J:645:VAL:HB	3:J:701:LEU:HD23	1.99	0.44
3:J:749:LYS:HD3	3:J:753:SER:HB2	1.98	0.44
3:J:814:CYS:HB3	3:J:890:THR:OG1	2.17	0.44
3:J:839:VAL:HG12	3:J:839:VAL:O	2.16	0.44
3:J:839:VAL:HG12	3:J:864:LEU:HD12	1.98	0.44
5:L:405:ILE:HG21	5:L:405:ILE:HD13	1.43	0.44
5:L:446:GLN:HE21	5:L:446:GLN:HB3	1.56	0.44
1:A:233:ASP:N	1:A:233:ASP:OD2	2.30	0.44
1:A:250:ASP:OD2	5:F:605:GLU:HA	2.17	0.44
1:A:28:LEU:O	1:A:31:LEU:CD1	2.66	0.44
1:B:147:GLN:HG3	1:B:148:ARG:H	1.81	0.44
2:C:1262:LYS:HA	2:C:1262:LYS:HD3	1.64	0.44
2:C:150:HIS:CG	2:C:454:ARG:HH21	2.35	0.44
2:C:241:LEU:HD11	2:C:246:LEU:HD11	1.99	0.44
2:C:484:LEU:CD1	2:C:485:ASP:H	2.30	0.44
2:C:490:GLN:CD	5:F:472:GLN:HE22	2.21	0.44
3:D:665:GLN:HG3	3:D:669:GLN:NE2	2.32	0.44
3:D:845:ALA:CB	3:D:881:LYS:HD2	2.47	0.44
3:D:903:LEU:HD13	3:D:909:ILE:HD13	1.99	0.44
1:G:77:ASP:O	1:G:81:ILE:HG13	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:31:LEU:HA	1:H:31:LEU:HD13	1.67	0.44
2:I:1176:LEU:HD13	2:I:1180:MET:HG2	2.00	0.44
2:I:389:PHE:CD2	2:I:389:PHE:N	2.85	0.44
2:I:483:ASP:HB2	2:I:486:THR:CG2	2.48	0.44
2:I:478:ARG:HG2	2:I:492:MET:HG2	2.00	0.44
3:J:269:TYR:O	3:J:273:ILE:HG13	2.16	0.44
3:J:283:LEU:HA	3:J:283:LEU:HD23	1.67	0.44
3:J:388:ARG:HB2	3:J:390:LEU:HD13	2.00	0.44
3:J:744:ARG:O	3:J:759:ILE:HB	2.17	0.44
2:C:1087:TYR:HE1	2:C:1215:GLY:HA2	1.81	0.44
2:C:1237:HIS:O	2:C:1238:LEU:C	2.56	0.44
2:C:39:ILE:O	2:C:39:ILE:HG23	2.18	0.44
2:C:496:LYS:HE3	2:C:496:LYS:HB3	1.48	0.44
3:D:1151:LYS:O	3:D:1153:PRO:HD3	2.18	0.44
3:D:1216:ALA:HB1	3:D:1218:HIS:HD2	1.81	0.44
3:D:1279:GLN:H	3:D:1279:GLN:HG2	1.60	0.44
3:D:1322:ALA:HB1	3:D:1326:GLN:NE2	2.32	0.44
3:D:241:VAL:HG12	3:D:242:LEU:N	2.32	0.44
3:D:113:HIS:CE1	3:D:307:LEU:HD13	2.52	0.44
3:D:325:LYS:HG3	3:D:329:ASP:HB2	2.00	0.44
3:D:664:ILE:HG23	3:D:664:ILE:HD12	1.74	0.44
3:D:733:SER:O	3:D:734:ALA:C	2.56	0.44
5:F:269:LEU:HA	5:F:269:LEU:HD23	1.60	0.44
1:G:101:THR:O	1:G:103:ASN:ND2	2.50	0.44
1:G:136:GLU:C	1:G:138:ALA:H	2.20	0.44
2:I:338:THR:HG22	2:I:345:PRO:HB3	1.99	0.44
2:I:44:GLU:HA	2:I:54:ARG:HH12	1.81	0.44
3:J:1165:PHE:HD2	3:J:1173:ARG:NE	2.14	0.44
3:J:264:ASP:OD2	3:J:264:ASP:N	2.51	0.44
3:J:349:TYR:CE2	3:J:379:PRO:HG2	2.48	0.44
3:J:480:ALA:O	3:J:485:MET:N	2.50	0.44
3:J:749:LYS:HG2	3:J:753:SER:O	2.18	0.44
5:L:157:ARG:CZ	5:L:159:SER:OG	2.65	0.44
1:A:285:THR:HG23	1:A:288:GLU:H	1.83	0.44
1:A:292:THR:OG1	1:A:295:LEU:HD12	2.17	0.44
2:C:1136:GLN:NE2	2:C:1140:LYS:HZ3	2.13	0.44
2:C:1158:LYS:C	2:C:1159:VAL:HG22	2.37	0.44
2:C:518:ASN:O	2:C:519:ASN:CB	2.64	0.44
3:D:1270:GLY:O	3:D:1298:VAL:HG11	2.17	0.44
3:D:184:ALA:O	3:D:188:LEU:N	2.42	0.44
2:C:1276:TRP:CZ2	3:D:801:VAL:HG21	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:G:37:HIS:HB3	1:H:45:ARG:CZ	2.47	0.44
1:G:65:LEU:CD2	1:G:65:LEU:N	2.80	0.44
2:I:1211:ARG:HE	2:I:1220:GLN:NE2	2.15	0.44
2:I:15:PHE:CD2	2:I:1190:ALA:HB2	2.51	0.44
2:I:22:LEU:HA	2:I:22:LEU:HD22	1.74	0.44
2:I:386:GLU:HA	2:I:390:PHE:HD2	1.81	0.44
2:I:496:LYS:HE3	2:I:496:LYS:HB3	1.81	0.44
2:I:746:ALA:HA	2:I:974:ARG:HH21	1.82	0.44
3:J:396:ALA:O	3:J:400:MET:HG3	2.18	0.44
1:B:33:ARG:NH1	2:C:1081:PRO:HG3	2.32	0.44
2:C:694:ARG:HB2	2:C:798:GLN:NE2	2.33	0.44
2:C:759:SER:C	2:C:761:GLN:N	2.70	0.44
2:C:815:SER:HB3	2:C:1077:SER:HB3	2.00	0.44
3:D:1199:PHE:HB2	3:D:1202:GLU:HB2	1.98	0.44
3:D:1268:ASN:HB2	3:D:1301:THR:OG1	2.17	0.44
3:D:606:ASN:OD1	3:D:610:ARG:NE	2.51	0.44
5:F:557:LYS:O	5:F:561:MET:HB2	2.18	0.44
2:I:188:PHE:CE1	2:I:194:LEU:HD13	2.53	0.44
2:I:211:ARG:HD3	2:I:357:ASN:O	2.17	0.44
2:I:42:ASP:OD2	2:I:44:GLU:HG2	2.18	0.44
2:I:558:VAL:HG13	2:I:573:ASN:HB3	1.98	0.44
2:I:69:GLN:HE21	2:I:101:ARG:HD2	1.82	0.44
2:I:82:VAL:HG22	2:I:92:TYR:CZ	2.51	0.44
3:J:24:LEU:HA	3:J:24:LEU:HD13	1.51	0.44
5:L:151:VAL:HG11	5:L:158:LEU:CD2	2.47	0.44
1:A:118:ASP:OD2	1:A:119:GLY:N	2.50	0.44
1:A:93:GLN:HB2	1:A:120:ASP:OD2	2.18	0.44
2:C:616:ILE:O	2:C:636:CYS:HB3	2.17	0.44
2:C:833:ILE:HD13	2:C:929:ILE:HD11	2.00	0.44
3:D:355:ILE:O	3:D:355:ILE:HG13	2.18	0.44
3:D:434:ILE:HG21	3:D:434:ILE:HD13	1.71	0.44
3:D:767:LEU:HD12	3:D:767:LEU:N	2.32	0.44
5:F:383:ASN:HB2	5:F:412:LEU:HD21	2.00	0.44
1:G:61:ILE:CG1	1:G:171:LEU:HD23	2.48	0.44
2:I:1011:LEU:O	2:I:1015:ALA:N	2.43	0.44
2:I:670:PHE:CE2	2:I:1113:LEU:HB3	2.52	0.44
2:I:209:ILE:O	2:I:212:ALA:N	2.51	0.44
2:I:607:SER:N	2:I:610:GLU:HB2	2.33	0.44
3:J:1289:ASN:OD1	3:J:1290:ARG:CZ	2.66	0.44
3:J:395:LYS:HE2	5:L:536:THR:HG21	2.00	0.44
2:C:1117:LEU:HD21	2:C:1182:ILE:HD12	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1240:ASP:HB3	3:D:445:LYS:CD	2.43	0.44
3:D:1290:ARG:HA	3:D:1290:ARG:HD3	1.81	0.44
3:D:139:LEU:HA	3:D:139:LEU:HD23	1.42	0.44
3:D:515:ARG:HH21	3:D:717:VAL:HG23	1.83	0.44
5:F:295:CYS:SG	5:F:333:VAL:HB	2.58	0.44
2:I:814:ASP:CG	2:I:1106:ARG:HH12	2.19	0.44
2:I:1220:GLN:HG2	2:I:1221:PHE:N	2.33	0.44
3:J:19:ALA:HA	3:J:1344:LEU:HD12	1.98	0.44
3:J:452:LEU:HA	3:J:452:LEU:HD23	1.73	0.44
3:J:490:ILE:HG21	3:J:490:ILE:HD13	1.69	0.44
3:J:682:VAL:HA	3:J:685:ILE:HD13	1.99	0.44
3:J:75:TYR:N	3:J:75:TYR:CD1	2.86	0.44
3:J:770:LEU:HA	3:J:770:LEU:HD12	1.66	0.44
1:A:179:PRO:O	1:A:207:THR:HG23	2.17	0.44
1:B:60:GLU:CD	1:B:142:MET:HB2	2.38	0.44
2:C:1253:LEU:HD13	2:C:1254:VAL:N	2.33	0.44
2:C:247:ARG:HH21	2:C:274:ILE:HG21	1.83	0.44
2:C:49:LEU:HB2	2:C:73:TYR:OH	2.17	0.44
5:F:127:ILE:O	5:F:130:VAL:N	2.51	0.44
5:F:412:LEU:HD12	5:F:412:LEU:HA	1.73	0.44
5:F:517:SER:OG	5:F:517:SER:O	2.35	0.44
1:G:96:ASP:O	1:G:148:ARG:HG3	2.18	0.44
1:H:103:ASN:HA	1:H:141:SER:CB	2.47	0.44
2:I:971:LEU:CD2	2:I:1018:TYR:HB2	2.48	0.44
2:I:277:LEU:O	2:I:281:ASP:N	2.51	0.44
2:I:367:TYR:CD2	2:I:376:PRO:HA	2.52	0.44
2:I:532:ALA:HB1	2:I:538:LEU:HD11	2.00	0.44
2:I:614:TYR:CD1	2:I:652:TYR:CE1	3.05	0.44
2:I:953:LEU:HD12	2:I:953:LEU:HA	1.56	0.44
2:I:980:VAL:O	2:I:984:VAL:HB	2.17	0.44
3:J:1149:ARG:CZ	3:J:1153:PRO:HG2	2.48	0.44
3:J:1332:LEU:HA	3:J:1332:LEU:HD13	1.77	0.44
3:J:860:ARG:HB3	3:J:861:ASN:H	1.68	0.44
5:L:220:LYS:O	5:L:223:GLU:HB3	2.18	0.44
5:L:166:VAL:HG23	5:L:258:GLN:O	2.18	0.44
5:L:484:ALA:HB1	5:L:491:GLU:CG	2.48	0.44
1:B:183:ILE:O	1:B:183:ILE:HD12	2.18	0.44
2:C:605:TYR:C	2:C:606:LEU:HD12	2.38	0.44
3:D:26:SER:HB3	3:D:29:MET:HB2	2.00	0.44
3:D:703:THR:HA	3:D:717:VAL:HA	2.00	0.44
3:D:827:GLU:C	3:D:829:GLY:H	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:F:227:GLN:CG	5:F:252:LEU:HA	2.48	0.44
1:H:228:LEU:HD23	1:H:228:LEU:HA	1.59	0.44
2:I:1252:SER:HB3	2:I:1255:THR:O	2.16	0.44
2:I:361:SER:O	2:I:364:VAL:HB	2.18	0.44
2:I:494:ASN:ND2	2:I:497:PRO:HD3	2.33	0.44
2:I:796:LEU:N	2:I:796:LEU:HD12	2.33	0.44
3:J:201:LEU:HD12	3:J:221:ILE:HD13	2.00	0.44
3:J:518:VAL:HG23	3:J:547:ARG:NH2	2.33	0.44
3:J:706:VAL:HG12	3:J:715:LYS:CB	2.46	0.44
3:J:805:GLN:HB3	3:J:806:ASP:H	1.61	0.44
3:J:797:THR:CG2	3:J:924:GLY:HA3	2.36	0.44
5:L:357:GLN:HA	5:L:360:ASP:HB2	1.99	0.44
5:L:384:LEU:HA	5:L:384:LEU:HD23	1.55	0.44
1:A:137:ASN:N	1:A:137:ASN:OD1	2.51	0.43
2:C:1195:ILE:HD13	2:C:1195:ILE:HG21	1.70	0.43
2:C:1223:ARG:HD3	2:C:1223:ARG:HH11	1.67	0.43
2:C:62:TYR:C	2:C:64:GLY:N	2.71	0.43
3:D:1171:GLY:HA2	3:D:1193:TRP:CZ3	2.51	0.43
3:D:1257:VAL:O	3:D:1260:MET:N	2.51	0.43
3:D:1332:LEU:N	3:D:1332:LEU:HD22	2.32	0.43
3:D:1344:LEU:N	3:D:1344:LEU:HD12	2.33	0.43
3:D:381:ILE:HD13	3:D:381:ILE:HG21	1.67	0.43
5:F:584:ARG:HA	5:F:584:ARG:HH11	1.83	0.43
2:I:672:GLU:HG2	2:I:1187:PHE:HA	2.00	0.43
5:L:161:LEU:HD12	5:L:161:LEU:HA	1.68	0.43
1:A:233:ASP:C	1:A:234:LEU:HD22	2.38	0.43
1:B:181:GLU:OE2	1:B:208:ASN:HA	2.18	0.43
2:C:819:SER:HB2	2:C:1085:MET:SD	2.57	0.43
2:C:1142:ARG:HH22	2:C:1165:SER:HB2	1.81	0.43
2:C:479:LEU:HD23	2:C:479:LEU:HA	1.73	0.43
2:C:987:GLU:O	2:C:991:LYS:HG3	2.18	0.43
3:D:1169:THR:OG1	3:D:1192:LYS:HD3	2.18	0.43
3:D:1375:ALA:HB1	3:J:853:THR:HG21	2.00	0.43
3:D:266:ASN:O	3:D:267:ASP:C	2.54	0.43
3:D:733:SER:O	3:D:736:GLN:N	2.50	0.43
1:G:66:HIS:HB2	1:G:69:SER:OG	2.18	0.43
1:G:35:PHE:CE1	1:H:46:ILE:HG12	2.53	0.43
1:H:57:THR:OG1	1:H:147:GLN:HB3	2.17	0.43
2:I:1087:TYR:OH	2:I:1218:GLY:HA2	2.17	0.43
2:I:1252:SER:HB3	2:I:1257:GLN:H	1.83	0.43
2:I:1301:ARG:O	2:I:1304:MET:HB3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:276:GLN:O	2:I:280:ASP:N	2.43	0.43
2:I:409:LEU:HD13	2:I:427:ASP:HB3	2.00	0.43
3:J:1206:ARG:NH2	3:J:1223:LEU:HD13	2.34	0.43
3:J:265:LEU:HD23	3:J:265:LEU:HA	1.67	0.43
2:I:1268:GLN:HG2	3:J:467:ALA:HB1	2.00	0.43
5:L:251:LYS:HA	5:L:254:GLU:HG2	1.99	0.43
5:L:281:ARG:HA	5:L:284:GLU:OE1	2.18	0.43
1:B:44:ARG:HG3	1:B:183:ILE:HB	2.00	0.43
2:C:1312:ASN:HD21	2:C:1314:GLN:HG3	1.83	0.43
2:C:208:ILE:O	2:C:362:ALA:HB1	2.19	0.43
2:C:571:LEU:HD23	2:C:571:LEU:HA	1.66	0.43
3:D:293:ARG:O	3:D:294:ASN:C	2.57	0.43
3:D:474:LEU:HA	3:D:474:LEU:HD12	1.60	0.43
3:D:500:ILE:O	3:D:500:ILE:HG22	2.17	0.43
1:G:133:LEU:HA	1:G:133:LEU:HD13	1.79	0.43
2:I:22:LEU:HD13	2:I:23:ASP:N	2.34	0.43
2:I:387:ASN:O	2:I:394:ARG:HB2	2.19	0.43
2:I:640:GLY:O	2:I:641:GLU:HG3	2.18	0.43
3:J:1290:ARG:HD3	3:J:1290:ARG:HA	1.78	0.43
3:J:1357:ILE:O	3:J:1359:ALA:N	2.47	0.43
2:I:1267:GLY:HA3	3:J:347:VAL:O	2.18	0.43
1:A:255:ARG:HD3	1:A:259:ASP:OD2	2.18	0.43
1:B:100:LEU:O	1:B:143:ARG:HA	2.18	0.43
3:D:1248:ILE:HD13	3:D:1248:ILE:HG21	1.75	0.43
3:D:891:ASP:CA	3:D:1281:GLU:HG3	2.47	0.43
3:D:1372:ARG:NE	3:J:854:ALA:HB2	2.33	0.43
3:D:255:LEU:N	3:D:259:ARG:O	2.48	0.43
3:D:505:ASP:HB2	3:D:629:PHE:HE1	1.83	0.43
3:D:795:TYR:HE2	3:D:799:ARG:NE	2.15	0.43
3:D:910:ASN:ND2	4:E:15:ASN:O	2.50	0.43
5:F:552:THR:H	5:F:552:THR:HG23	1.59	0.43
2:I:1287:LEU:O	2:I:1290:MET:N	2.51	0.43
2:I:158:ASP:HB3	2:I:173:ASN:OD1	2.18	0.43
2:I:538:LEU:HA	2:I:542:ARG:NH2	2.33	0.43
2:I:811:ASN:N	2:I:811:ASN:OD1	2.46	0.43
3:J:1257:VAL:O	3:J:1260:MET:N	2.51	0.43
3:J:268:LEU:HB3	3:J:306:LEU:HD23	2.00	0.43
3:J:35:PHE:HD1	3:J:101:ARG:HD3	1.81	0.43
3:J:75:TYR:CD2	3:J:83:VAL:HG21	2.54	0.43
5:L:502:LYS:HE3	5:L:502:LYS:HB2	1.32	0.43
2:C:1086:PRO:O	2:C:1094:VAL:HG12	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1109:ILE:HD12	2:C:1109:ILE:HA	1.59	0.43
2:C:1196:LYS:CD	2:C:1206:THR:HG23	2.29	0.43
2:C:819:SER:HB2	2:C:1085:MET:HG3	2.00	0.43
3:D:306:LEU:O	3:D:326:SER:HB2	2.18	0.43
3:D:541:LEU:HD23	3:D:541:LEU:HA	1.44	0.43
5:F:306:PHE:CE1	5:F:315:TRP:CD2	3.00	0.43
1:G:59:VAL:HG13	1:G:143:ARG:O	2.19	0.43
2:I:1142:ARG:HH12	2:I:1169:VAL:HG21	1.81	0.43
2:I:344:GLY:HA3	2:I:346:TYR:CZ	2.53	0.43
2:I:6:THR:HG21	2:I:782:VAL:HG23	1.99	0.43
3:J:385:LEU:HD23	3:J:385:LEU:HA	1.43	0.43
3:J:41:PRO:HB3	3:J:270:ARG:HG3	2.00	0.43
3:J:426:ALA:CB	3:J:427:PRO:HD3	2.44	0.43
5:L:611:LEU:HD23	5:L:611:LEU:HA	1.56	0.43
2:C:1101:LEU:HA	2:C:1101:LEU:HD23	1.58	0.43
2:C:1137:GLU:HG2	2:C:1140:LYS:CG	2.49	0.43
2:C:756:TYR:CD1	2:C:756:TYR:N	2.86	0.43
3:D:1237:VAL:HG11	3:D:1253:ILE:HD13	2.00	0.43
3:D:813:ASP:HA	3:D:897:HIS:HB2	2.01	0.43
3:D:97:VAL:HG12	3:D:101:ARG:CG	2.45	0.43
5:F:103:ARG:HH11	5:F:103:ARG:HD3	1.64	0.43
1:G:47:LEU:O	1:G:180:VAL:HG11	2.19	0.43
2:I:1176:LEU:HD22	2:I:1181:PRO:HD2	2.00	0.43
3:J:118:LYS:HD2	3:J:118:LYS:HA	1.62	0.43
3:J:189:LEU:HD23	3:J:189:LEU:HA	1.77	0.43
3:J:102:MET:CE	3:J:246:PRO:HD3	2.47	0.43
2:C:1239:VAL:HG13	2:C:1240:ASP:N	2.33	0.43
2:C:409:LEU:HA	2:C:409:LEU:HD23	1.65	0.43
2:C:88:ARG:HG2	2:C:90:VAL:CG2	2.49	0.43
2:C:992:LEU:HG	2:C:997:TRP:HE1	1.84	0.43
3:D:108:ALA:CB	3:D:279:LEU:HD22	2.49	0.43
3:D:108:ALA:HB3	3:D:279:LEU:HD22	1.99	0.43
2:C:1116:HIS:HE1	3:D:641:ILE:H	1.65	0.43
3:D:647:PRO:HG3	3:D:697:MET:CB	2.47	0.43
3:D:717:VAL:H	3:D:717:VAL:HG22	1.54	0.43
3:D:755:ILE:HG22	3:D:757:THR:H	1.83	0.43
5:F:593:LYS:O	5:F:597:LYS:N	2.50	0.43
1:H:107:ILE:HG23	1:H:135:ASP:HA	1.99	0.43
2:I:1087:TYR:CE1	2:I:1215:GLY:HA2	2.53	0.43
2:I:156:PHE:CZ	2:I:445:ILE:HG13	2.54	0.43
2:I:690:VAL:HG12	2:I:1234:LYS:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:705:GLU:HB2	2:I:794:LEU:H	1.83	0.43
3:J:299:LEU:O	3:J:302:ALA:N	2.51	0.43
1:A:176:CYS:O	1:A:177:TYR:C	2.57	0.43
1:A:92:VAL:HA	1:A:120:ASP:O	2.18	0.43
2:C:830:THR:HG22	2:C:1058:ARG:O	2.19	0.43
2:C:404:LYS:HD2	2:C:404:LYS:HA	1.75	0.43
2:C:544:GLY:O	2:C:548:ARG:HG3	2.19	0.43
2:C:551:HIS:CE1	2:C:553:THR:HG23	2.53	0.43
3:D:502:PRO:HB3	3:D:506:VAL:CG1	2.48	0.43
1:G:219:ARG:HD3	1:G:219:ARG:HH11	1.67	0.43
1:H:83:LEU:HD12	1:H:86:LYS:HE2	2.01	0.43
2:I:159:SER:O	2:I:171:LEU:O	2.37	0.43
2:I:818:VAL:O	2:I:1079:ILE:HA	2.19	0.43
3:J:1140:ARG:HH21	3:J:1236:GLU:CG	2.22	0.43
3:J:1171:GLY:HA2	3:J:1193:TRP:CZ3	2.35	0.43
5:L:98:VAL:HB	5:L:402:LEU:HD11	1.99	0.43
5:L:484:ALA:HB1	5:L:491:GLU:CB	2.49	0.43
5:L:576:VAL:HG12	5:L:587:ILE:CD1	2.49	0.43
1:A:102:LEU:HD23	1:A:115:ILE:HA	2.01	0.43
1:A:196:THR:OG1	1:A:197:ASP:N	2.50	0.43
1:A:320:ASN:O	1:A:323:PRO:HD3	2.18	0.43
2:C:120:GLN:HE21	2:C:120:GLN:HB2	1.64	0.43
2:C:1307:ASN:HB3	2:C:1312:ASN:O	2.18	0.43
2:C:469:VAL:O	2:C:472:GLU:HB3	2.18	0.43
2:C:760:ASN:O	2:C:761:GLN:O	2.37	0.43
3:D:341:ASN:HB2	3:D:1352:ILE:HD13	2.00	0.43
2:C:1305:TYR:CE1	3:D:379:PRO:HG3	2.52	0.43
3:D:411:ILE:HG23	3:D:411:ILE:HD12	1.69	0.43
5:F:503:GLU:CG	5:F:504:PRO:HD2	2.48	0.43
1:G:152:TYR:CE2	2:I:824:GLN:HG2	2.54	0.43
2:I:1053:TYR:N	2:I:1053:TYR:CD1	2.87	0.43
2:I:1211:ARG:HB2	2:I:1220:GLN:HE21	1.83	0.43
2:I:518:ASN:O	2:I:519:ASN:HB3	2.18	0.43
2:I:598:VAL:HG22	2:I:628:HIS:CE1	2.54	0.43
3:J:343:LEU:HA	3:J:343:LEU:HD12	1.80	0.43
5:L:312:SER:OG	5:L:313:ASP:N	2.51	0.43
5:L:295:CYS:CB	5:L:330:LEU:HD23	2.49	0.43
1:A:118:ASP:HB3	1:A:121:VAL:CG2	2.45	0.43
1:A:92:VAL:HA	1:A:120:ASP:HB3	2.00	0.43
1:A:225:ALA:HA	1:A:228:LEU:HD12	2.00	0.43
2:C:1042:LEU:HD13	2:C:1046:VAL:HG22	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:517:GLN:O	2:C:517:GLN:HG2	2.16	0.43
2:C:979:LEU:HD12	2:C:979:LEU:HA	1.72	0.43
3:D:1292:LEU:HA	3:J:1226:VAL:HG21	2.01	0.43
3:D:135:ILE:HG21	3:D:135:ILE:HD13	1.65	0.43
3:D:352:ARG:HB3	3:D:467:ALA:HA	2.01	0.43
3:D:748:ALA:HA	3:D:754:ILE:HA	2.00	0.43
3:D:848:VAL:HG23	3:D:858:VAL:HG13	2.01	0.43
3:D:905:ARG:HH12	4:E:10:VAL:HG11	1.82	0.43
3:D:908:ILE:HD13	3:D:909:ILE:N	2.34	0.43
5:F:512:GLY:C	5:F:514:ASP:N	2.71	0.43
5:F:601:PRO:HA	5:F:604:SER:H	1.84	0.43
1:G:50:SER:HG	1:H:35:PHE:HZ	1.67	0.43
1:G:52:PRO:HG2	1:G:219:ARG:NE	2.29	0.43
1:H:82:LEU:HA	1:H:85:LEU:HD12	2.00	0.43
2:I:1262:LYS:HD3	2:I:1262:LYS:HA	1.83	0.43
2:I:1331:ARG:HA	2:I:1335:ILE:O	2.19	0.43
2:I:1334:GLY:O	3:J:25:ALA:CB	2.66	0.43
2:I:149:LEU:HA	2:I:149:LEU:HD12	1.62	0.43
2:I:403:MET:SD	2:I:403:MET:C	2.98	0.43
2:I:705:GLU:CD	2:I:705:GLU:H	2.20	0.43
3:J:1257:VAL:O	3:J:1258:ARG:C	2.57	0.43
3:J:1355:ARG:HB3	3:J:1355:ARG:HE	1.52	0.43
3:J:364:HIS:CE1	3:J:365:GLN:OE1	2.72	0.43
1:A:257:VAL:HG22	1:A:276:HIS:O	2.19	0.42
1:A:270:LEU:HA	1:A:270:LEU:HD23	1.82	0.42
2:C:1209:GLN:HA	2:C:1225:VAL:O	2.19	0.42
2:C:1268:GLN:HE22	3:D:352:ARG:HH11	1.65	0.42
2:C:493:ILE:HG22	2:C:493:ILE:H	1.49	0.42
2:C:557:ARG:HH21	2:C:608:ALA:N	2.16	0.42
2:C:632:ASP:O	2:C:647:ARG:HB2	2.19	0.42
2:C:653:MET:HG2	2:C:654:ASP:N	2.34	0.42
2:C:870:ILE:HB	2:C:944:ARG:HD3	2.01	0.42
2:C:967:LEU:HD12	2:C:967:LEU:HA	1.48	0.42
3:D:915:ILE:HG12	3:D:915:ILE:H	1.64	0.42
3:D:93:THR:HG22	3:D:94:GLN:N	2.34	0.42
5:F:290:LEU:HB3	5:F:333:VAL:HG21	2.01	0.42
5:F:399:LEU:HA	5:F:399:LEU:HD12	1.32	0.42
2:I:745:GLU:HG3	2:I:1017:GLN:HB3	2.01	0.42
2:I:1038:GLN:HG3	2:I:1038:GLN:O	2.19	0.42
2:I:518:ASN:CG	2:I:519:ASN:N	2.72	0.42
2:I:607:SER:H	2:I:610:GLU:HB2	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:1262:ARG:O	3:J:1280:VAL:HG23	2.19	0.42
3:J:26:SER:HB2	3:J:236:TRP:CZ2	2.53	0.42
3:J:495:ASN:N	3:J:495:ASN:OD1	2.52	0.42
2:I:1276:TRP:CZ2	3:J:801:VAL:HG21	2.54	0.42
4:K:50:ALA:O	4:K:54:ILE:HG12	2.19	0.42
5:L:123:ILE:HG21	5:L:123:ILE:HD13	1.80	0.42
5:L:341:LEU:O	5:L:344:LEU:HB3	2.19	0.42
5:L:350:GLU:H	5:L:350:GLU:HG3	1.54	0.42
5:L:354:THR:O	5:L:358:VAL:HG23	2.19	0.42
2:C:235:ASN:OD1	2:C:236:LYS:HG2	2.19	0.42
2:C:263:VAL:HG12	2:C:264:GLU:O	2.19	0.42
2:C:490:GLN:O	2:C:492:MET:N	2.52	0.42
2:C:591:TYR:CE1	2:C:616:ILE:HG21	2.54	0.42
3:D:322:ARG:CZ	3:D:322:ARG:HB2	2.48	0.42
5:F:227:GLN:NE2	5:F:251:LYS:NZ	2.66	0.42
5:F:597:LYS:O	5:F:603:ARG:HG3	2.19	0.42
5:F:611:LEU:HD23	5:F:611:LEU:HA	1.82	0.42
1:G:13:LEU:HG	1:G:14:VAL:N	2.34	0.42
2:I:1210:ILE:HG22	2:I:1211:ARG:H	1.84	0.42
2:I:161:LYS:H	2:I:161:LYS:HG2	1.63	0.42
2:I:194:LEU:HD12	2:I:194:LEU:HA	1.80	0.42
2:I:515:MET:CG	2:I:515:MET:O	2.67	0.42
2:I:798:GLN:NE2	2:I:827:ARG:O	2.49	0.42
2:I:894:GLN:HG3	2:I:894:GLN:O	2.18	0.42
3:J:647:PRO:HG3	3:J:697:MET:N	2.34	0.42
3:J:903:LEU:HA	3:J:903:LEU:HD12	1.93	0.42
5:L:271:ASN:O	5:L:275:VAL:HG23	2.19	0.42
5:L:572:THR:HG23	5:L:575:GLU:CB	2.43	0.42
2:C:158:ASP:CG	2:C:159:SER:N	2.71	0.42
3:D:298:MET:HE1	5:F:402:LEU:O	2.19	0.42
3:D:528:THR:HG23	3:D:529:GLY:N	2.35	0.42
3:D:544:LEU:O	3:D:574:VAL:HB	2.19	0.42
3:D:647:PRO:CG	3:D:697:MET:HB3	2.50	0.42
3:D:825:VAL:HG22	3:D:833:GLU:N	2.35	0.42
5:F:560:ARG:O	5:F:563:PHE:O	2.37	0.42
2:I:1308:ILE:HD12	3:J:380:PHE:CZ	2.53	0.42
2:I:643:SER:HG	2:I:645:PHE:HE1	1.68	0.42
2:I:757:THR:OG1	2:I:758:ARG:N	2.52	0.42
2:I:964:LEU:HD22	2:I:1025:PHE:CG	2.55	0.42
3:J:1205:GLU:O	3:J:1208:ASP:HB2	2.19	0.42
3:J:127:LEU:HA	3:J:127:LEU:HD12	1.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:317:THR:HG22	3:J:322:ARG:O	2.19	0.42
3:J:438:GLU:HA	3:J:439:PRO:HD3	1.86	0.42
3:J:596:LEU:HD12	3:J:601:ILE:HG13	2.01	0.42
5:L:165:PHE:HD1	5:L:259:PHE:HA	1.84	0.42
1:A:187:VAL:O	1:A:187:VAL:HG23	2.20	0.42
1:A:212:ASP:HA	1:A:213:PRO:HD3	1.93	0.42
2:C:1067:ALA:HB2	2:C:1073:LYS:HA	2.00	0.42
2:C:1322:SER:OG	2:C:1323:PHE:N	2.52	0.42
3:D:707:ILE:O	3:D:714:GLU:N	2.52	0.42
5:F:463:LEU:HA	5:F:463:LEU:HD23	1.80	0.42
5:F:470:MET:HE1	5:F:486:ARG:HH12	1.83	0.42
1:G:12:ARG:HA	1:H:231:PHE:HZ	1.81	0.42
1:H:51:MET:HB3	1:H:178:SER:CB	2.50	0.42
2:I:146:VAL:HG13	2:I:529:ARG:HB3	2.01	0.42
2:I:230:PHE:HE1	2:I:287:VAL:HG21	1.85	0.42
2:I:388:LEU:HA	2:I:388:LEU:HD23	1.76	0.42
2:I:735:LYS:HA	2:I:748:ILE:HG22	2.02	0.42
2:I:920:VAL:HG13	2:I:1054:LEU:HD21	2.01	0.42
3:J:294:ASN:HD22	5:L:406:GLN:NE2	2.18	0.42
3:J:591:ILE:HG13	3:J:604:MET:HE2	2.00	0.42
2:I:1225:VAL:HA	3:J:638:SER:CB	2.49	0.42
3:J:810:THR:HG23	3:J:811:GLU:N	2.34	0.42
1:A:51:MET:HE1	1:A:216:ALA:HB1	2.00	0.42
1:B:31:LEU:HD13	1:B:31:LEU:HA	1.85	0.42
2:C:1112:ILE:O	2:C:1113:LEU:C	2.56	0.42
2:C:975:ILE:HG13	2:C:1014:LEU:HD22	2.01	0.42
3:D:141:PHE:CE1	3:D:181:GLY:HA3	2.54	0.42
3:D:371:LYS:O	3:D:372:MET:C	2.54	0.42
3:D:495:ASN:O	3:D:497:GLU:N	2.53	0.42
3:D:513:MET:HE1	3:D:579:LEU:HD13	2.01	0.42
5:F:121:LYS:HD3	5:F:121:LYS:HA	1.83	0.42
5:F:357:GLN:H	5:F:357:GLN:HG3	1.58	0.42
1:G:52:PRO:CG	1:G:219:ARG:HH21	2.32	0.42
2:I:1132:LEU:HB3	2:I:1177:ARG:CZ	2.49	0.42
3:J:125:GLY:O	3:J:128:LEU:N	2.52	0.42
3:J:1356:LEU:HD23	3:J:1356:LEU:HA	1.67	0.42
3:J:517:CYS:HA	3:J:716:GLN:HE22	1.84	0.42
3:J:844:THR:HG21	3:J:858:VAL:HG21	2.00	0.42
3:J:83:VAL:HG13	3:J:92:VAL:HG13	2.01	0.42
5:L:452:ILE:HG21	5:L:452:ILE:HD13	1.69	0.42
1:A:249:PHE:CE2	1:A:254:LEU:HG	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:147:SER:OG	2:C:455:SER:HB3	2.19	0.42
2:C:468:LEU:HA	2:C:468:LEU:HD23	1.77	0.42
3:D:426:ALA:CB	3:D:427:PRO:HD3	2.48	0.42
3:D:461:PHE:HD2	3:D:461:PHE:HA	1.64	0.42
3:D:491:LEU:HA	3:D:491:LEU:HD23	1.71	0.42
2:C:1099:ASN:HD21	3:D:505:ASP:CG	2.22	0.42
3:D:88:CYS:SG	3:D:88:CYS:O	2.77	0.42
5:F:396:ASN:O	5:F:398:GLY:N	2.53	0.42
5:F:95:THR:OG1	5:F:96:ASP:N	2.52	0.42
1:G:39:LEU:HD23	1:G:39:LEU:HA	1.70	0.42
2:I:1164:PHE:O	2:I:1168:GLU:HB2	2.19	0.42
2:I:196:VAL:HG12	2:I:204:LEU:O	2.19	0.42
2:I:229:ILE:HB	2:I:240:GLU:HB2	2.01	0.42
2:I:374:GLU:HA	2:I:375:PRO:HD3	1.81	0.42
3:J:599:LYS:HA	3:J:599:LYS:HD3	1.36	0.42
2:I:1105:SER:HB2	3:J:731:ARG:HG2	2.01	0.42
3:J:832:LYS:HD3	3:J:1242:ARG:NH1	2.34	0.42
1:B:109:PRO:HG3	1:B:132:HIS:CD2	2.55	0.42
2:C:745:GLU:N	2:C:1017:GLN:HG3	2.34	0.42
2:C:478:ARG:HH12	2:C:482:GLY:HA2	1.85	0.42
2:C:678:ARG:CZ	2:C:1106:ARG:HG2	2.50	0.42
2:C:700:VAL:HG11	2:C:1114:GLU:HG2	2.00	0.42
2:C:794:LEU:HD21	2:C:796:LEU:HD11	2.02	0.42
2:C:797:GLY:O	2:C:1231:TYR:OH	2.37	0.42
3:D:1342:ASP:OD1	3:D:1343:GLU:N	2.53	0.42
3:D:188:LEU:HA	3:D:188:LEU:HD23	1.87	0.42
3:D:262:THR:HG23	3:D:262:THR:O	2.18	0.42
3:D:559:ALA:HB3	3:D:562:GLU:O	2.20	0.42
3:D:576:ARG:NH1	3:D:593:ASN:O	2.52	0.42
3:D:831:VAL:HG13	3:D:831:VAL:O	2.20	0.42
2:I:338:THR:CG2	2:I:345:PRO:HB3	2.50	0.42
2:I:46:GLN:OE1	2:I:47:TYR:N	2.52	0.42
3:J:113:HIS:O	3:J:114:ILE:C	2.57	0.42
3:J:1179:PRO:HG2	3:J:1183:SER:O	2.19	0.42
3:J:146:VAL:HG23	3:J:158:GLN:O	2.19	0.42
3:J:557:LYS:O	3:J:559:ALA:N	2.52	0.42
3:J:660:GLU:O	3:J:664:ILE:HG12	2.20	0.42
3:J:698:MET:O	3:J:702:GLN:HB3	2.20	0.42
3:J:797:THR:HG22	3:J:924:GLY:CA	2.35	0.42
5:L:482:GLU:O	5:L:486:ARG:NH2	2.53	0.42
1:A:219:ARG:O	1:A:222:THR:HB	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:153:VAL:CG2	1:B:177:TYR:HE2	2.32	0.42
2:C:48:GLY:N	2:C:461:GLU:OE1	2.52	0.42
2:C:499:SER:O	2:C:503:LYS:HB2	2.20	0.42
2:C:680:LEU:O	2:C:681:MET:C	2.58	0.42
2:C:865:LEU:HD23	2:C:865:LEU:HA	1.70	0.42
3:D:227:PHE:CE1	3:D:234:PRO:HG3	2.54	0.42
3:D:249:LEU:HD23	3:D:249:LEU:HA	1.71	0.42
3:D:337:ARG:HB3	3:D:1324:SER:O	2.20	0.42
3:D:357:VAL:HG22	3:D:461:PHE:CD1	2.55	0.42
3:D:411:ILE:HA	3:D:411:ILE:HD13	1.78	0.42
3:D:482:ALA:C	3:D:483:LEU:HG	2.39	0.42
3:D:609:TYR:HA	3:D:617:THR:OG1	2.20	0.42
3:D:74:LYS:HD3	3:D:75:TYR:HE1	1.85	0.42
3:D:770:LEU:HA	3:D:770:LEU:HD12	1.52	0.42
5:F:127:ILE:O	5:F:128:ASN:C	2.58	0.42
2:I:819:SER:HB2	2:I:1085:MET:CG	2.49	0.42
3:J:1150:PRO:O	3:J:1153:PRO:HG3	2.20	0.42
3:J:189:LEU:HD22	3:J:234:PRO:HB3	2.02	0.42
5:L:148:TYR:CE1	5:L:158:LEU:HD21	2.55	0.42
5:L:219:GLU:O	5:L:222:ALA:HB3	2.19	0.42
5:L:261:LEU:HD12	5:L:261:LEU:N	2.35	0.42
5:L:603:ARG:HG2	5:L:603:ARG:H	1.47	0.42
1:A:208:ASN:OD1	1:A:208:ASN:N	2.44	0.42
1:A:78:ILE:HA	1:A:78:ILE:HD13	1.79	0.42
1:B:12:ARG:O	1:B:29:GLU:O	2.37	0.42
1:B:195:ARG:HB3	1:B:198:LEU:HD21	2.02	0.42
2:C:169:LYS:HG2	2:C:169:LYS:O	2.20	0.42
2:C:269:ILE:HG23	2:C:273:HIS:CB	2.48	0.42
2:C:52:ALA:HB2	2:C:461:GLU:HG3	2.01	0.42
2:C:629:PHE:CD2	2:C:634:VAL:HG11	2.55	0.42
2:C:871:VAL:HG22	2:C:872:TYR:O	2.19	0.42
3:D:1365:TYR:O	3:D:1366:HIS:C	2.58	0.42
3:D:497:GLU:HA	3:D:498:PRO:HD3	1.95	0.42
3:D:515:ARG:CZ	3:D:719:PHE:CE2	3.02	0.42
3:D:528:THR:HG22	3:D:532:GLU:OE1	2.20	0.42
3:D:79:LYS:HG3	3:D:80:HIS:N	2.35	0.42
5:F:551:LEU:HA	5:F:551:LEU:HD23	1.79	0.42
1:H:109:PRO:HA	1:H:132:HIS:HA	2.02	0.42
1:H:214:GLU:HG2	1:H:218:ARG:HE	1.85	0.42
2:I:836:LEU:CD1	2:I:1054:LEU:HD13	2.46	0.42
2:I:241:LEU:HA	2:I:241:LEU:HD12	1.71	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:563:THR:OG1	2:I:564:PRO:HD2	2.20	0.42
2:I:75:LEU:HA	2:I:75:LEU:HD13	1.55	0.42
2:I:718:ALA:HB3	2:I:781:ASP:H	1.85	0.42
3:J:1261:LEU:HD12	3:J:1261:LEU:C	2.40	0.42
3:J:1266:ILE:HB	3:J:1274:PHE:O	2.20	0.42
3:D:1291:GLU:CD	3:J:1302:TYR:OH	2.58	0.42
3:J:211:GLU:OE2	3:J:214:ARG:NH2	2.53	0.42
3:J:888:CYS:HB2	3:J:898:CYS:SG	2.59	0.42
3:J:64:PRO:HG3	3:J:90:VAL:CG1	2.49	0.42
5:L:599:ARG:O	5:L:604:SER:OG	2.37	0.42
1:A:101:THR:HG22	1:A:103:ASN:HD21	1.85	0.42
1:B:51:MET:HB3	1:B:178:SER:HA	2.02	0.42
1:B:85:LEU:HA	1:B:85:LEU:HD23	1.61	0.42
2:C:100:LEU:HA	2:C:100:LEU:HD23	1.70	0.42
2:C:1144:PHE:O	2:C:1147:ARG:HB2	2.18	0.42
2:C:1254:VAL:HG13	2:C:1255:THR:H	1.84	0.42
2:C:5:TYR:HB2	2:C:781:ASP:OD1	2.20	0.42
2:C:718:ALA:HB2	2:C:783:LEU:HD21	2.02	0.42
3:D:1177:ILE:HG13	3:D:1186:TYR:O	2.20	0.42
3:D:214:ARG:HA	3:D:217:LEU:HB2	2.02	0.42
3:D:22:ILE:HG21	3:D:22:ILE:HD13	1.79	0.42
3:D:737:ILE:O	3:D:740:LEU:N	2.49	0.42
5:F:306:PHE:HE1	5:F:315:TRP:CE2	2.37	0.42
5:F:462:LYS:HE3	5:F:488:LEU:HD11	2.01	0.42
1:H:134:THR:HG23	1:H:135:ASP:H	1.83	0.42
2:I:1233:LEU:N	2:I:1233:LEU:HD22	2.34	0.42
2:I:260:LYS:HE3	2:I:262:TYR:CE1	2.55	0.42
2:I:721:GLY:N	2:I:740:GLU:OE1	2.40	0.42
2:I:903:ARG:NH2	2:I:910:ALA:HB2	2.35	0.42
3:J:489:ASN:HA	3:J:904:ALA:HB1	2.01	0.42
5:L:363:ARG:O	5:L:367:ILE:HG13	2.20	0.42
5:L:483:LEU:CD1	5:L:483:LEU:H	2.30	0.42
2:C:179:TYR:H	2:C:397:LEU:HA	1.85	0.41
3:D:1342:ASP:OD1	3:D:1344:LEU:N	2.48	0.41
3:D:18:ASP:HB2	3:D:1373:ARG:NH1	2.35	0.41
3:D:318:GLY:C	3:D:320:ASN:N	2.73	0.41
3:D:354:VAL:HG12	3:D:355:ILE:N	2.35	0.41
3:D:490:ILE:HD13	3:D:490:ILE:HG21	1.68	0.41
3:D:8:LEU:HD23	3:D:9:LYS:H	1.84	0.41
1:G:190:ALA:O	1:G:198:LEU:HB2	2.20	0.41
1:G:231:PHE:HA	1:H:218:ARG:HH11	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:23:HIS:CE1	1:H:206:GLU:HG2	2.54	0.41
2:I:1136:GLN:O	2:I:1137:GLU:HB3	2.20	0.41
2:I:1161:LEU:HA	2:I:1161:LEU:HD12	1.67	0.41
2:I:971:LEU:HD22	2:I:1018:TYR:HB2	2.02	0.41
3:J:132:LEU:O	3:J:132:LEU:HD22	2.20	0.41
3:J:246:PRO:HA	3:J:247:PRO:HD3	1.84	0.41
3:J:482:ALA:O	3:J:488:ASN:ND2	2.54	0.41
3:J:694:SER:O	3:J:698:MET:HB2	2.20	0.41
3:J:702:GLN:HG2	3:J:703:THR:N	2.30	0.41
5:L:101:TYR:O	5:L:102:MET:C	2.57	0.41
5:L:470:MET:C	5:L:478:PRO:HD3	2.41	0.41
1:A:190:ALA:HB2	1:A:200:LYS:CB	2.41	0.41
1:A:67:GLU:HG2	1:A:67:GLU:H	1.45	0.41
1:B:102:LEU:HD23	1:B:102:LEU:HA	1.84	0.41
2:C:1075:VAL:O	2:C:1075:VAL:HG12	2.20	0.41
2:C:310:ILE:HG21	2:C:325:LEU:HB3	2.03	0.41
2:C:603:ILE:HG12	2:C:603:ILE:H	1.65	0.41
2:C:661:VAL:HB	2:C:665:ALA:HB3	2.01	0.41
2:C:700:VAL:HG21	2:C:1114:GLU:HG2	2.01	0.41
2:C:857:VAL:HG23	2:C:862:LEU:HD11	2.02	0.41
2:C:895:LEU:H	2:C:895:LEU:HG	1.54	0.41
2:C:96:LEU:HD12	2:C:96:LEU:HA	1.77	0.41
3:D:447:ILE:HG21	3:D:447:ILE:HD13	1.64	0.41
3:D:83:VAL:O	3:D:91:GLU:HA	2.20	0.41
5:F:227:GLN:OE1	5:F:251:LYS:NZ	2.53	0.41
5:F:230:VAL:HG13	5:F:231:THR:H	1.85	0.41
1:G:172:LEU:CD1	1:G:172:LEU:H	2.33	0.41
1:H:7:GLU:CD	1:H:8:PHE:N	2.73	0.41
2:I:1088:ASP:OD1	2:I:1092:THR:N	2.53	0.41
2:I:339:ASN:HB3	2:I:343:HIS:H	1.84	0.41
2:I:672:GLU:H	2:I:672:GLU:HG3	1.54	0.41
2:I:798:GLN:OE1	2:I:828:PHE:CD1	2.73	0.41
2:I:850:ILE:HG23	2:I:850:ILE:HD12	1.77	0.41
3:J:307:LEU:HD23	3:J:307:LEU:HA	1.19	0.41
3:J:434:ILE:HG21	3:J:434:ILE:HD13	1.46	0.41
3:J:473:THR:HG23	3:J:476:ALA:H	1.85	0.41
5:L:466:ILE:HD11	5:L:487:MET:CE	2.51	0.41
5:L:580:PHE:HD1	5:L:580:PHE:HA	1.62	0.41
1:A:154:PRO:O	1:A:158:ARG:HG3	2.20	0.41
1:A:78:ILE:HD12	1:A:78:ILE:HG23	1.77	0.41
2:C:799:ASN:HA	2:C:1231:TYR:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:1278:LEU:HD23	2:C:1278:LEU:HA	1.67	0.41
2:C:494:ASN:HD22	2:C:497:PRO:CD	2.27	0.41
2:C:676:ALA:O	2:C:677:ASN:C	2.58	0.41
2:C:996:ARG:HD3	2:C:996:ARG:HA	1.60	0.41
2:C:1246:ARG:CZ	3:D:348:ASP:OD1	2.69	0.41
3:D:440:VAL:O	3:D:442:ILE:HG12	2.21	0.41
3:D:872:LEU:O	3:D:877:VAL:HG12	2.20	0.41
5:F:230:VAL:HG13	5:F:231:THR:N	2.36	0.41
1:G:54:CYS:HB3	1:G:148:ARG:HG2	2.01	0.41
2:I:1330:ILE:HG21	2:I:1330:ILE:HD13	1.75	0.41
2:I:363:LEU:HA	2:I:363:LEU:HD23	1.62	0.41
2:I:395:TYR:HE2	2:I:397:LEU:CD1	2.33	0.41
2:I:593:LYS:HG3	2:I:595:THR:HG23	2.02	0.41
2:I:959:ASP:O	2:I:963:GLU:HG2	2.21	0.41
3:J:1144:LEU:HD23	3:J:1144:LEU:HA	1.57	0.41
3:J:1151:LYS:O	3:J:1153:PRO:HD3	2.21	0.41
3:J:1344:LEU:HD12	3:J:1344:LEU:N	2.35	0.41
3:J:252:LEU:HD22	3:J:260:PHE:HD2	1.85	0.41
3:J:309:ASN:HB2	3:J:326:SER:HB3	2.02	0.41
3:J:331:ILE:HD13	3:J:331:ILE:HG21	1.67	0.41
3:J:352:ARG:HB3	3:J:467:ALA:HA	2.02	0.41
3:J:530:PRO:O	3:J:533:ALA:HB3	2.20	0.41
3:J:514:THR:CB	3:J:576:ARG:HG2	2.47	0.41
3:J:762:ASN:OD1	3:J:764:ARG:N	2.53	0.41
5:L:130:VAL:HA	5:L:133:SER:HB2	2.01	0.41
2:C:1007:LYS:O	2:C:1011:LEU:HG	2.20	0.41
2:C:1120:ALA:O	2:C:1123:GLY:N	2.53	0.41
2:C:1178:LYS:HA	2:C:1178:LYS:HD3	1.55	0.41
2:C:867:GLU:HG3	2:C:867:GLU:H	1.30	0.41
3:D:10:ALA:O	3:D:11:GLN:HB2	2.21	0.41
3:D:117:LEU:HD12	3:D:117:LEU:HA	1.77	0.41
3:D:530:PRO:O	3:D:531:LYS:C	2.57	0.41
3:D:74:LYS:CD	3:D:87:LYS:HD3	2.47	0.41
1:G:226:GLU:O	1:G:229:GLU:HB2	2.20	0.41
1:G:50:SER:HB2	1:H:8:PHE:HZ	1.86	0.41
1:G:52:PRO:HG2	1:G:219:ARG:NH2	2.34	0.41
1:H:102:LEU:HA	1:H:102:LEU:HD23	1.66	0.41
2:I:1251:TYR:CD1	2:I:1301:ARG:NH2	2.89	0.41
2:I:540:ARG:H	2:I:540:ARG:HG3	1.50	0.41
2:I:819:SER:OG	2:I:820:GLU:N	2.50	0.41
3:J:1177:ILE:HG13	3:J:1186:TYR:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:J:1307:LEU:HD23	3:J:1312:ALA:HA	2.02	0.41
3:J:270:ARG:O	3:J:273:ILE:HB	2.21	0.41
3:J:278:ARG:O	3:J:281:ARG:HB2	2.20	0.41
3:J:556:GLU:O	3:J:564:VAL:N	2.47	0.41
3:J:796:LEU:HA	3:J:796:LEU:HD12	1.61	0.41
4:K:6:VAL:HG12	4:K:51:LEU:HD13	2.02	0.41
1:B:151:GLY:O	1:B:177:TYR:CD2	2.70	0.41
2:C:9:LYS:HG2	2:C:1171:ARG:HD3	2.02	0.41
2:C:1184:THR:HG22	2:C:1185:PRO:O	2.20	0.41
2:C:149:LEU:HG	2:C:451:ARG:HH11	1.84	0.41
2:C:142:GLU:CG	2:C:760:ASN:HD21	2.31	0.41
3:D:233:LYS:HA	3:D:234:PRO:HD3	1.87	0.41
3:D:430:HIS:ND1	3:D:430:HIS:N	2.66	0.41
3:D:501:VAL:HG22	3:D:502:PRO:O	2.20	0.41
3:D:506:VAL:HG12	3:D:506:VAL:H	1.52	0.41
3:D:536:LEU:O	3:D:539:SER:OG	2.37	0.41
3:D:614:LEU:O	3:D:615:LYS:C	2.59	0.41
3:D:821:MET:HA	3:D:881:LYS:HA	2.01	0.41
3:D:905:ARG:HH11	4:E:16:ARG:HD2	1.84	0.41
3:D:95:THR:HG23	3:D:95:THR:O	2.20	0.41
5:F:161:LEU:C	5:F:262:VAL:HG23	2.41	0.41
5:F:575:GLU:O	5:F:579:GLN:HG2	2.20	0.41
2:I:1281:TYR:CE2	3:J:431:ARG:HB2	2.55	0.41
2:I:1322:SER:O	2:I:1325:VAL:N	2.53	0.41
2:I:948:ILE:O	2:I:951:MET:HB3	2.20	0.41
3:J:1153:PRO:HA	3:J:1214:PRO:O	2.20	0.41
3:J:266:ASN:O	3:J:267:ASP:C	2.57	0.41
3:J:844:THR:HG21	3:J:858:VAL:CG2	2.50	0.41
4:K:10:VAL:HG13	4:K:16:ARG:HB2	2.02	0.41
5:L:284:GLU:OE2	5:L:359:LYS:HD2	2.20	0.41
5:L:601:PRO:HB2	5:L:605:GLU:HG2	2.01	0.41
1:A:43:LEU:HD23	1:A:43:LEU:HA	1.64	0.41
2:C:1341:ASP:HB3	2:C:1342:GLU:H	1.35	0.41
2:C:194:LEU:HA	2:C:194:LEU:HD12	1.33	0.41
2:C:626:GLU:HB3	2:C:628:HIS:CE1	2.55	0.41
2:C:929:ILE:O	2:C:930:ASP:HB2	2.19	0.41
2:C:960:LEU:O	2:C:963:GLU:HB2	2.20	0.41
3:D:1227:HIS:HA	3:D:1230:THR:HG22	2.03	0.41
3:D:1256:ILE:HD13	3:D:1256:ILE:HA	1.74	0.41
3:D:203:GLU:O	3:D:207:GLU:HG2	2.19	0.41
3:D:334:LYS:CG	3:D:335:GLN:H	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:599:LYS:HD3	3:D:599:LYS:HA	1.66	0.41
3:D:884:SER:OG	3:D:886:VAL:HG12	2.21	0.41
3:D:909:ILE:HA	3:D:909:ILE:HD12	1.85	0.41
1:H:195:ARG:CB	1:H:198:LEU:HD21	2.50	0.41
1:H:17:GLU:OE1	1:H:25:LYS:HD3	2.20	0.41
2:I:1132:LEU:O	2:I:1132:LEU:HD23	2.19	0.41
2:I:1301:ARG:HH11	2:I:1301:ARG:HD2	1.71	0.41
2:I:1331:ARG:HH11	2:I:1331:ARG:HD3	1.72	0.41
2:I:176:ILE:HD13	2:I:176:ILE:HG21	1.74	0.41
2:I:618:GLN:HG3	2:I:619:ALA:N	2.36	0.41
3:J:146:VAL:HG12	3:J:147:ILE:N	2.36	0.41
3:J:546:ALA:O	3:J:573:THR:HA	2.20	0.41
3:J:709:ARG:C	3:J:711:GLY:N	2.74	0.41
3:J:735:ALA:O	3:J:738:ARG:HB3	2.20	0.41
4:K:53:GLU:HB3	4:K:59:ILE:CG1	2.50	0.41
5:L:236:LYS:N	5:L:236:LYS:HD3	2.35	0.41
5:L:412:LEU:N	5:L:435:ILE:HG12	2.36	0.41
5:L:552:THR:H	5:L:552:THR:HG23	1.65	0.41
2:C:639:LYS:O	2:C:641:GLU:N	2.54	0.41
2:C:818:VAL:HG22	2:C:1096:ILE:HG12	2.03	0.41
3:D:543:SER:OG	3:D:544:LEU:N	2.52	0.41
3:D:649:LYS:HD2	3:D:652:GLU:OE1	2.21	0.41
3:D:656:GLU:O	3:D:659:ALA:N	2.54	0.41
3:D:891:ASP:O	3:D:892:PHE:HB2	2.20	0.41
4:E:32:VAL:O	4:E:34:GLY:N	2.52	0.41
5:F:223:GLU:O	5:F:226:ALA:HB3	2.21	0.41
5:F:559:LEU:HA	5:F:559:LEU:HD12	1.63	0.41
1:H:45:ARG:HD3	1:H:45:ARG:HH11	1.69	0.41
2:I:1198:LEU:HD22	2:I:1198:LEU:HA	1.78	0.41
2:I:538:LEU:HG	2:I:538:LEU:H	1.33	0.41
2:I:696:ASP:HB3	2:I:697:LYS:H	1.62	0.41
2:I:888:THR:CG2	2:I:916:SER:OG	2.68	0.41
3:J:1175:LEU:O	3:J:1187:GLU:HA	2.21	0.41
3:J:1219:ASP:O	3:J:1220:ILE:C	2.58	0.41
3:J:72:CYS:SG	3:J:73:GLY:N	2.94	0.41
3:J:863:LEU:HD11	3:J:901:ARG:HB3	2.02	0.41
5:L:518:HIS:O	5:L:519:LEU:C	2.58	0.41
5:L:559:LEU:HA	5:L:559:LEU:HD12	1.31	0.41
2:C:289:VAL:HG13	2:C:319:LEU:HD11	2.03	0.41
2:C:513:GLN:NE2	2:C:526:TYR:CE2	2.89	0.41
2:C:530:ILE:HD12	2:C:530:ILE:HG23	1.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:802:VAL:HG12	2:C:1228:GLY:O	2.20	0.41
3:D:1158:GLU:HA	3:D:1223:LEU:HD11	2.02	0.41
3:D:1158:GLU:HG3	3:D:1186:TYR:CZ	2.56	0.41
3:D:500:ILE:HG23	3:D:500:ILE:HD12	1.78	0.41
3:D:83:VAL:H	3:D:83:VAL:HG12	1.56	0.41
5:F:396:ASN:C	5:F:398:GLY:N	2.74	0.41
1:G:61:ILE:HG22	1:G:62:ASP:N	2.35	0.41
1:G:86:LYS:NZ	1:G:174:ASP:HB2	2.36	0.41
1:H:93:GLN:HB2	1:H:120:ASP:HB3	2.02	0.41
2:I:688:GLN:HB2	2:I:1235:LEU:HD22	2.01	0.41
2:I:596:ASP:CG	2:I:597:GLY:H	2.23	0.41
2:I:807:TRP:HE3	2:I:808:ASN:HB2	1.85	0.41
1:G:66:HIS:NE2	2:I:929:ILE:HG22	2.36	0.41
3:J:1160:SER:HA	3:J:1204:VAL:O	2.21	0.41
3:J:147:ILE:HD11	3:J:179:LYS:HZ3	1.85	0.41
3:J:294:ASN:HD21	5:L:402:LEU:HD23	1.85	0.41
3:J:909:ILE:HG23	3:J:909:ILE:O	2.19	0.41
1:A:112:ALA:O	1:A:115:ILE:HG13	2.20	0.41
1:A:228:LEU:HD11	1:B:224:LEU:HD23	2.03	0.41
2:C:1172:LEU:HD22	2:C:1172:LEU:O	2.21	0.41
2:C:24:VAL:HG12	2:C:25:PRO:O	2.21	0.41
2:C:37:LYS:HA	2:C:37:LYS:HD3	1.83	0.41
2:C:548:ARG:HB3	2:C:569:ILE:O	2.21	0.41
3:D:112:ALA:O	3:D:300:GLN:NE2	2.46	0.41
3:D:13:LYS:HD3	3:D:13:LYS:HA	1.91	0.41
3:D:390:LEU:N	3:D:390:LEU:HD12	2.36	0.41
3:D:442:ILE:HG23	3:D:442:ILE:HD12	1.72	0.41
3:D:733:SER:O	3:D:735:ALA:N	2.54	0.41
5:F:442:SER:O	5:F:445:ASP:N	2.54	0.41
1:G:118:ASP:HB3	1:G:121:VAL:HG21	2.02	0.41
1:H:16:ILE:HA	1:H:26:VAL:HG13	2.03	0.41
1:H:44:ARG:HG3	1:H:183:ILE:HB	2.03	0.41
2:I:171:LEU:HD23	2:I:171:LEU:HA	1.86	0.41
2:I:195:PHE:CB	2:I:203:LYS:HD3	2.50	0.41
2:I:344:GLY:O	2:I:346:TYR:CD2	2.74	0.41
2:I:212:ALA:HA	2:I:359:ARG:HG3	2.03	0.41
2:I:517:GLN:O	2:I:518:ASN:C	2.60	0.41
2:I:521:LEU:HD12	2:I:521:LEU:HA	1.82	0.41
2:I:523:GLU:HG2	2:I:527:LYS:CE	2.36	0.41
2:I:617:ALA:HB3	2:I:653:MET:HB2	2.02	0.41
2:I:761:GLN:HA	2:I:762:ASN:HA	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:794:LEU:HD21	2:I:796:LEU:HD21	2.01	0.41
2:I:829:THR:HG23	2:I:1059:ARG:HG2	2.03	0.41
3:J:425:ARG:HH11	3:J:425:ARG:HD2	1.60	0.41
5:L:124:GLU:O	5:L:128:ASN:HB2	2.19	0.41
1:A:273:GLU:OE2	1:A:293:PRO:HD2	2.21	0.41
2:C:1043:ALA:HB1	2:C:1044:PRO:HD2	2.02	0.41
2:C:138:ILE:HD11	2:C:506:PHE:HB3	2.02	0.41
2:C:719:LYS:O	2:C:779:ARG:HG3	2.21	0.41
3:D:31:ARG:CZ	3:D:106:GLU:OE2	2.69	0.41
3:D:205:LEU:C	3:D:205:LEU:HD13	2.41	0.41
4:E:62:GLN:O	4:E:66:VAL:HG23	2.21	0.41
5:F:137:TYR:HA	5:F:138:PRO:HD3	1.95	0.41
5:F:557:LYS:O	5:F:561:MET:N	2.52	0.41
1:H:191:ARG:HH12	3:J:370:LYS:HZ3	1.68	0.41
2:I:37:LYS:HD3	2:I:37:LYS:HA	1.94	0.41
2:I:756:TYR:N	2:I:756:TYR:CD1	2.83	0.41
2:I:807:TRP:HE1	2:I:1086:PRO:HG3	1.85	0.41
3:J:1223:LEU:HA	3:J:1223:LEU:HD13	1.73	0.41
3:J:849:LEU:H	3:J:849:LEU:HD22	1.86	0.41
3:J:908:ILE:HD13	3:J:909:ILE:N	2.35	0.41
5:L:118:ASP:O	5:L:122:ARG:HG3	2.20	0.41
5:L:127:ILE:HG13	5:L:127:ILE:H	1.70	0.41
5:L:262:VAL:HG12	5:L:264:LYS:HG3	2.02	0.41
1:B:214:GLU:O	1:B:218:ARG:HG3	2.21	0.41
2:C:1049:ILE:HG21	2:C:1049:ILE:HD13	1.75	0.41
2:C:1143:GLU:OE1	2:C:1147:ARG:HD3	2.21	0.41
2:C:210:LEU:O	2:C:215:TYR:HB2	2.21	0.41
2:C:311:CYS:O	2:C:311:CYS:SG	2.79	0.41
2:C:384:LEU:O	2:C:387:ASN:N	2.54	0.41
2:C:619:ALA:HB1	2:C:657:THR:HA	2.03	0.41
2:C:667:LEU:HD23	2:C:667:LEU:HA	1.84	0.41
2:C:831:ILE:HG21	2:C:831:ILE:HD13	1.85	0.41
3:D:120:LEU:HB3	3:D:121:PRO:HD3	2.02	0.41
3:D:1291:GLU:C	3:D:1292:LEU:HD12	2.41	0.41
3:D:1364:ALA:O	3:D:1367:GLN:HB3	2.20	0.41
3:D:20:ILE:HG21	3:D:20:ILE:HD13	1.85	0.41
3:D:450:HIS:CE1	3:D:452:LEU:HB2	2.56	0.41
3:D:556:GLU:HG2	3:D:558:ASP:HB2	2.02	0.41
3:D:697:MET:O	3:D:701:LEU:HB2	2.21	0.41
2:I:1341:ASP:HB3	2:I:1342:GLU:H	1.57	0.41
2:I:229:ILE:HG21	2:I:240:GLU:OE2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:65:ASN:O	2:I:105:TYR:HD2	2.03	0.41
2:I:865:LEU:HA	2:I:865:LEU:HD23	1.77	0.41
2:I:1342:GLU:O	3:J:1369:ARG:NH2	2.54	0.41
3:J:368:LEU:HD23	3:J:368:LEU:C	2.41	0.41
3:J:601:ILE:HG21	3:J:601:ILE:HD13	1.61	0.41
3:J:795:TYR:HE2	3:J:799:ARG:NE	2.17	0.41
3:J:813:ASP:OD1	3:J:883:ARG:NH2	2.52	0.41
1:A:12:ARG:HG2	1:A:13:LEU:H	1.85	0.40
2:C:1172:LEU:HD22	2:C:1172:LEU:C	2.42	0.40
2:C:1211:ARG:O	2:C:1211:ARG:HG3	2.21	0.40
2:C:145:ILE:HD12	2:C:145:ILE:N	2.37	0.40
2:C:328:SER:OG	2:C:330:HIS:CD2	2.73	0.40
2:C:624:ASP:OD1	2:C:625:GLU:N	2.52	0.40
2:C:929:ILE:HG21	2:C:929:ILE:HD13	1.73	0.40
3:D:1257:VAL:HA	3:D:1260:MET:HE2	2.03	0.40
3:D:1264:ALA:O	3:D:1278:GLU:N	2.34	0.40
3:D:54:ASP:OD1	3:D:54:ASP:N	2.54	0.40
3:D:770:LEU:O	3:D:774:ILE:HG13	2.21	0.40
5:F:99:ARG:HA	5:F:99:ARG:HD3	1.80	0.40
1:G:108:GLY:HA2	1:G:109:PRO:HD3	1.90	0.40
1:G:170:ARG:O	1:G:171:LEU:HD13	2.20	0.40
1:G:75:GLN:HG2	1:G:76:GLU:OE2	2.20	0.40
1:H:19:VAL:O	1:H:23:HIS:HB3	2.21	0.40
2:I:606:LEU:HD12	2:I:606:LEU:N	2.37	0.40
2:I:663:VAL:HG23	2:I:664:GLY:N	2.36	0.40
2:I:896:THR:OG1	2:I:899:GLU:HG3	2.21	0.40
3:J:470:VAL:CG1	3:J:472:LEU:HD23	2.49	0.40
3:J:648:GLU:OE2	3:J:649:LYS:HE2	2.21	0.40
3:J:847:ASP:HA	3:J:860:ARG:H	1.86	0.40
5:L:278:ASP:OD1	5:L:281:ARG:NH1	2.48	0.40
2:C:1106:ARG:H	2:C:1106:ARG:HD2	1.86	0.40
2:C:670:PHE:CD2	2:C:1113:LEU:HB3	2.56	0.40
2:C:131:THR:HG22	2:C:135:THR:N	2.11	0.40
2:C:183:TRP:HB2	2:C:199:ASP:HA	2.03	0.40
2:C:660:VAL:HG13	2:C:661:VAL:N	2.36	0.40
2:C:725:GLN:O	2:C:725:GLN:HG2	2.21	0.40
2:C:77:GLU:HA	2:C:78:PRO:HD3	1.84	0.40
2:C:836:LEU:O	2:C:1052:VAL:N	2.44	0.40
3:D:1237:VAL:HG13	3:D:1238:GLN:N	2.36	0.40
3:D:1307:LEU:HD12	3:D:1307:LEU:N	2.36	0.40
3:D:1321:SER:HB2	3:D:1349:GLU:OE2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:242:LEU:HD23	3:D:243:PRO:O	2.21	0.40
2:C:1243:MET:HA	3:D:353:SER:CB	2.51	0.40
5:F:269:LEU:O	5:F:272:SER:N	2.54	0.40
1:G:45:ARG:HH12	1:H:37:HIS:HB2	1.86	0.40
2:I:1332:SER:OG	3:J:327:LEU:HD13	2.21	0.40
3:J:184:ALA:O	3:J:187:ALA:HB3	2.21	0.40
1:A:182:ARG:O	1:A:183:ILE:HD12	2.21	0.40
2:C:817:LEU:HD23	2:C:1078:LYS:HB3	2.04	0.40
2:C:109:ALA:HB1	2:C:111:GLU:HA	2.02	0.40
2:C:1115:THR:HG22	2:C:1228:GLY:HA3	2.03	0.40
2:C:1120:ALA:HB1	2:C:1198:LEU:CD1	2.51	0.40
2:C:47:TYR:HD2	2:C:47:TYR:HA	1.72	0.40
2:C:142:GLU:N	2:C:760:ASN:OD1	2.54	0.40
2:C:836:LEU:CD1	2:C:836:LEU:N	2.82	0.40
3:D:1233:ILE:O	3:D:1234:VAL:C	2.58	0.40
3:D:205:LEU:O	3:D:205:LEU:HD13	2.22	0.40
3:D:259:ARG:HD2	5:F:505:ILE:HD13	2.03	0.40
5:F:144:LEU:HA	5:F:144:LEU:HD12	1.78	0.40
5:F:379:MET:HG2	5:F:416:VAL:HG22	2.03	0.40
1:G:73:GLY:O	1:G:134:THR:HG22	2.22	0.40
1:G:20:SER:O	1:G:21:SER:C	2.59	0.40
2:I:1046:VAL:HG12	2:I:1046:VAL:H	1.59	0.40
2:I:163:LYS:HE3	2:I:163:LYS:HB3	1.73	0.40
2:I:27:LEU:HD23	2:I:27:LEU:HA	1.78	0.40
2:I:643:SER:OG	2:I:645:PHE:HE1	2.05	0.40
3:J:97:VAL:O	3:J:101:ARG:HG3	2.21	0.40
3:J:188:LEU:O	3:J:191:SER:OG	2.28	0.40
3:J:253:VAL:HA	3:J:254:PRO:HD3	1.72	0.40
3:J:422:LEU:HA	3:J:422:LEU:HD12	1.83	0.40
3:J:847:ASP:HB3	3:J:856:ILE:CG2	2.51	0.40
3:J:836:ARG:HG3	3:J:869:CYS:HB3	2.03	0.40
5:L:587:ILE:HA	5:L:590:ILE:CD1	2.51	0.40
1:A:145:LYS:HE3	1:A:145:LYS:HB3	1.91	0.40
1:A:85:LEU:O	1:A:86:LYS:C	2.58	0.40
1:B:88:LEU:HD12	1:B:88:LEU:HA	1.74	0.40
2:C:930:ASP:HB3	2:C:1053:TYR:HB2	2.03	0.40
2:C:1062:PRO:HA	2:C:1076:ILE:O	2.21	0.40
2:C:208:ILE:HG21	2:C:208:ILE:HD13	1.79	0.40
2:C:617:ALA:HB3	2:C:653:MET:CG	2.51	0.40
2:C:842:ASP:HB2	2:C:1045:GLY:O	2.21	0.40
3:D:1347:LEU:HG	3:D:1357:ILE:CG2	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:D:515:ARG:NH2	3:D:717:VAL:HG23	2.37	0.40
3:D:592:VAL:HG22	3:D:592:VAL:H	1.69	0.40
5:F:107:THR:OG1	5:F:108:VAL:N	2.53	0.40
5:F:110:LEU:HD23	5:F:110:LEU:HA	1.73	0.40
1:A:316:MET:HB2	5:F:600:HIS:CE1	2.57	0.40
1:G:38:THR:N	1:H:45:ARG:NH1	2.70	0.40
2:I:1101:LEU:HD23	3:J:725:MET:SD	2.61	0.40
2:I:1106:ARG:HE	3:J:731:ARG:HH21	1.70	0.40
2:I:801:ARG:HA	2:I:1228:GLY:O	2.22	0.40
2:I:1247:SER:OG	2:I:1248:THR:N	2.51	0.40
2:I:41:GLN:NE2	2:I:73:TYR:CZ	2.89	0.40
2:I:62:TYR:C	2:I:64:GLY:N	2.74	0.40
2:I:791:LEU:HD23	2:I:791:LEU:HA	1.73	0.40
2:I:861:ALA:HB1	2:I:882:ILE:HD13	2.03	0.40
2:I:976:ARG:HH12	2:I:990:ASP:HB3	1.86	0.40
3:J:47:ARG:HD2	3:J:47:ARG:HA	1.85	0.40
3:J:872:LEU:CD2	3:J:877:VAL:HG11	2.43	0.40
5:L:112:THR:OG1	5:L:115:GLY:N	2.51	0.40
5:L:230:VAL:HG13	5:L:231:THR:N	2.36	0.40
5:L:277:MET:HG3	5:L:362:ASN:HD21	1.86	0.40
5:L:519:LEU:C	5:L:519:LEU:HD23	2.42	0.40
5:L:565:ILE:HG22	5:L:566:ASP:OD2	2.21	0.40
1:A:201:LEU:HD12	1:A:201:LEU:HA	1.67	0.40
1:A:31:LEU:CD1	1:A:201:LEU:HB2	2.51	0.40
1:A:76:GLU:HB3	1:A:81:ILE:HG12	2.03	0.40
1:B:112:ALA:HA	1:B:115:ILE:HD11	2.03	0.40
1:B:103:ASN:HA	1:B:141:SER:HB2	2.03	0.40
1:B:215:GLU:HA	1:B:218:ARG:CD	2.51	0.40
1:B:40:GLY:HA3	1:B:185:TYR:CD1	2.56	0.40
2:C:1251:TYR:CE1	2:C:1301:ARG:CZ	3.04	0.40
2:C:556:GLY:HA2	2:C:659:GLN:O	2.21	0.40
2:C:615:VAL:HG21	2:C:645:PHE:CD2	2.57	0.40
2:C:746:ALA:HA	2:C:974:ARG:NH2	2.34	0.40
2:C:811:ASN:N	2:C:811:ASN:OD1	2.48	0.40
2:C:1313:HIS:HD2	3:D:477:GLN:NE2	2.19	0.40
4:E:39:VAL:HG13	4:E:52:ARG:HH21	1.86	0.40
5:F:148:TYR:OH	5:F:218:ARG:HA	2.21	0.40
5:F:476:ARG:HG3	5:F:477:GLU:N	2.35	0.40
5:F:606:VAL:O	5:F:609:SER:OG	2.40	0.40
1:G:14:VAL:HG13	1:G:27:THR:HB	2.03	0.40
1:H:31:LEU:HB2	1:H:199:ASP:HB2	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:98:VAL:HG22	1:H:99:ILE:H	1.87	0.40
2:I:109:ALA:HB1	2:I:111:GLU:HA	2.03	0.40
2:I:239:MET:HG2	2:I:240:GLU:O	2.21	0.40
2:I:729:ALA:O	2:I:755:LYS:HD3	2.22	0.40
3:J:215:LYS:HD2	3:J:216:LYS:N	2.36	0.40
3:J:201:LEU:HD22	3:J:217:LEU:HD13	2.02	0.40
3:J:268:LEU:HD13	3:J:306:LEU:HD23	2.04	0.40
5:L:343:LYS:O	5:L:347:ILE:HG13	2.21	0.40
3:J:392:THR:HG21	5:L:609:SER:HB3	2.04	0.40

All (3) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:C:33:ASP:OD1	5:F:554:ARG:NH2[4_455]	1.99	0.21
2:C:44:GLU:OE1	5:F:596:ARG:NH1[4_455]	2.05	0.15
2:C:940:GLU:OE1	1:H:139:SER:OG[4_455]	2.05	0.15

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	A	305/329 (93%)	271 (89%)	25 (8%)	9 (3%)	4 33
1	B	213/329 (65%)	191 (90%)	20 (9%)	2 (1%)	17 57
1	G	222/329 (68%)	182 (82%)	28 (13%)	12 (5%)	2 19
1	H	213/329 (65%)	193 (91%)	20 (9%)	0	100 100
2	C	1338/1342 (100%)	1225 (92%)	103 (8%)	10 (1%)	22 61
2	I	1338/1342 (100%)	1226 (92%)	100 (8%)	12 (1%)	17 57
3	D	1162/1407 (83%)	1074 (92%)	79 (7%)	9 (1%)	19 59

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
3	J	1151/1407 (82%)	1064 (92%)	82 (7%)	5 (0%)	34 71
4	E	87/91 (96%)	79 (91%)	8 (9%)	0	100 100
4	K	77/91 (85%)	74 (96%)	3 (4%)	0	100 100
5	F	461/613 (75%)	422 (92%)	37 (8%)	2 (0%)	34 71
5	L	463/613 (76%)	423 (91%)	39 (8%)	1 (0%)	47 79
All	All	7030/8222 (86%)	6424 (91%)	544 (8%)	62 (1%)	17 57

All (62) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	29	GLU
1	A	30	PRO
1	A	324	ALA
1	B	232	VAL
2	C	345	PRO
2	C	516	ASP
2	C	519	ASN
2	C	1159	VAL
3	D	10	ALA
1	G	13	LEU
1	G	14	VAL
1	G	62	ASP
1	G	162	GLU
2	I	516	ASP
2	I	1159	VAL
1	B	13	LEU
2	C	170	VAL
1	G	172	LEU
2	I	170	VAL
2	I	519	ASN
2	I	761	GLN
3	J	108	ALA
1	A	294	ASN
2	C	697	LYS
2	C	761	GLN
3	D	110	PRO
3	D	586	GLY
1	G	19	VAL
2	I	345	PRO
1	A	14	VAL

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Mol	Chain	Res	Type
1	A	167	PRO
2	C	1158	LYS
3	D	806	ASP
1	G	136	GLU
1	G	164	ASP
2	I	697	LYS
3	J	710	ASP
1	A	62	ASP
2	C	63	SER
2	C	760	ASN
3	D	710	ASP
5	F	477	GLU
1	G	49	SER
1	G	167	PRO
1	G	230	ALA
2	I	63	SER
2	I	484	LEU
2	I	514	PHE
2	I	1158	LYS
1	A	196	THR
3	D	108	ALA
5	F	513	ASP
1	G	134	THR
3	J	831	VAL
3	D	826	ILE
3	D	831	VAL
3	J	1180	VAL
5	L	477	GLU
2	I	1186	VAL
3	J	826	ILE
3	D	1180	VAL
1	A	178	SER

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	268/286 (94%)	249 (93%)	19 (7%)	14 48
1	B	184/286 (64%)	166 (90%)	18 (10%)	8 36
1	G	191/286 (67%)	179 (94%)	12 (6%)	18 53
1	H	183/286 (64%)	165 (90%)	18 (10%)	8 36
2	C	1155/1157 (100%)	1046 (91%)	109 (9%)	8 38
2	I	1154/1157 (100%)	1046 (91%)	108 (9%)	8 38
3	D	975/1168 (84%)	875 (90%)	100 (10%)	7 34
3	J	967/1168 (83%)	869 (90%)	98 (10%)	7 34
4	E	72/75 (96%)	64 (89%)	8 (11%)	6 31
4	K	67/75 (89%)	63 (94%)	4 (6%)	19 54
5	F	416/540 (77%)	373 (90%)	43 (10%)	7 34
5	L	418/540 (77%)	372 (89%)	46 (11%)	6 31
All	All	6050/7024 (86%)	5467 (90%)	583 (10%)	8 37

All (583) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	9	LEU
1	A	13	LEU
1	A	29	GLU
1	A	50	SER
1	A	61	ILE
1	A	74	VAL
1	A	115	ILE
1	A	133	LEU
1	A	145	LYS
1	A	165	GLU
1	A	215	GLU
1	A	219	ARG
1	A	231	PHE
1	A	233	ASP
1	A	234	LEU
1	A	245	GLU
1	A	246	LYS
1	A	284	ARG
1	A	310	ARG
1	B	6	THR
1	B	7	GLU
1	B	8	PHE

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Mol	Chain	Res	Type
1	B	18	GLN
1	B	29	GLU
1	B	58	GLU
1	B	60	GLU
1	B	65	LEU
1	B	75	GLN
1	B	79	LEU
1	B	80	GLU
1	B	97	GLU
1	B	107	ILE
1	B	110	VAL
1	B	124	VAL
1	B	134	THR
1	B	183	ILE
1	B	193	GLU
2	C	4	SER
2	C	11	ILE
2	C	22	LEU
2	C	39	ILE
2	C	42	ASP
2	C	60	GLN
2	C	70	TYR
2	C	82	VAL
2	C	85	CYS
2	C	90	VAL
2	C	91	THR
2	C	115	LYS
2	C	116	ASP
2	C	117	ILE
2	C	118	LYS
2	C	119	GLU
2	C	120	GLN
2	C	121	GLU
2	C	132	ASP
2	C	167	SER
2	C	189	ASP
2	C	285	ILE
2	C	299	LYS
2	C	306	THR
2	C	320	ASP
2	C	360	LEU
2	C	369	MET

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Mol	Chain	Res	Type
2	C	377	THR
2	C	394	ARG
2	C	419	ILE
2	C	423	ASP
2	C	434	ASP
2	C	445	ILE
2	C	484	LEU
2	C	485	ASP
2	C	486	THR
2	C	490	GLN
2	C	493	ILE
2	C	496	LYS
2	C	538	LEU
2	C	539	THR
2	C	542	ARG
2	C	554	HIS
2	C	589	THR
2	C	604	HIS
2	C	607	SER
2	C	609	ILE
2	C	615	VAL
2	C	620	ASN
2	C	623	LEU
2	C	633	LEU
2	C	639	LYS
2	C	657	THR
2	C	672	GLU
2	C	680	LEU
2	C	692	THR
2	C	697	LYS
2	C	705	GLU
2	C	706	ARG
2	C	714	VAL
2	C	748	ILE
2	C	773	LEU
2	C	781	ASP
2	C	788	SER
2	C	799	ASN
2	C	800	MET
2	C	814	ASP
2	C	817	LEU
2	C	819	SER

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Mol	Chain	Res	Type
2	C	826	ASP
2	C	840	SER
2	C	859	GLU
2	C	878	THR
2	C	890	LYS
2	C	892	GLU
2	C	895	LEU
2	C	919	ARG
2	C	944	ARG
2	C	946	LEU
2	C	951	MET
2	C	974	ARG
2	C	984	VAL
2	C	992	LEU
2	C	1002	LEU
2	C	1006	GLU
2	C	1040	ASP
2	C	1073	LYS
2	C	1082	ILE
2	C	1083	GLU
2	C	1108	ASN
2	C	1109	ILE
2	C	1114	GLU
2	C	1134	GLN
2	C	1136	GLN
2	C	1146	GLN
2	C	1151	LEU
2	C	1156	ARG
2	C	1159	VAL
2	C	1198	LEU
2	C	1210	ILE
2	C	1237	HIS
2	C	1238	LEU
2	C	1264	GLN
2	C	1265	PHE
2	C	1310	ASP
2	C	1327	LEU
2	C	1331	ARG
2	C	1341	ASP
2	C	1342	GLU
3	D	8	LEU
3	D	9	LYS

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Mol	Chain	Res	Type
3	D	18	ASP
3	D	26	SER
3	D	29	MET
3	D	46	TYR
3	D	79	LYS
3	D	84	ILE
3	D	94	GLN
3	D	95	THR
3	D	98	ARG
3	D	106	GLU
3	D	159	ILE
3	D	169	LEU
3	D	172	PHE
3	D	175	GLU
3	D	217	LEU
3	D	230	SER
3	D	252	LEU
3	D	312	ARG
3	D	324	LEU
3	D	330	MET
3	D	334	LYS
3	D	352	ARG
3	D	363	LEU
3	D	374	LEU
3	D	394	ILE
3	D	425	ARG
3	D	454	CYS
3	D	490	ILE
3	D	506	VAL
3	D	507	VAL
3	D	513	MET
3	D	514	THR
3	D	523	GLU
3	D	536	LEU
3	D	545	HIS
3	D	547	ARG
3	D	567	THR
3	D	568	SER
3	D	587	LEU
3	D	641	ILE
3	D	646	ILE
3	D	660	GLU

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Mol	Chain	Res	Type
3	D	661	VAL
3	D	678	ARG
3	D	680	ASN
3	D	683	ILE
3	D	685	ILE
3	D	697	MET
3	D	698	MET
3	D	701	LEU
3	D	702	GLN
3	D	707	ILE
3	D	708	ASN
3	D	710	ASP
3	D	712	GLN
3	D	717	VAL
3	D	720	ASN
3	D	740	LEU
3	D	746	LEU
3	D	754	ILE
3	D	770	LEU
3	D	788	LEU
3	D	798	ARG
3	D	805	GLN
3	D	810	THR
3	D	844	THR
3	D	847	ASP
3	D	848	VAL
3	D	849	LEU
3	D	853	THR
3	D	857	LEU
3	D	858	VAL
3	D	860	ARG
3	D	881	LYS
3	D	897	HIS
3	D	908	ILE
3	D	918	ILE
3	D	1135	THR
3	D	1155	ILE
3	D	1163	VAL
3	D	1170	LYS
3	D	1177	ILE
3	D	1186	TYR
3	D	1194	ARG

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Mol	Chain	Res	Type
3	D	1202	GLU
3	D	1221	LEU
3	D	1255	VAL
3	D	1273	ASP
3	D	1274	PHE
3	D	1275	LEU
3	D	1281	GLU
3	D	1284	ARG
3	D	1285	VAL
3	D	1289	ASN
3	D	1293	GLU
3	D	1298	VAL
3	D	1333	THR
3	D	1343	GLU
4	E	3	ARG
4	E	5	THR
4	E	13	ILE
4	E	16	ARG
4	E	28	ARG
4	E	39	VAL
4	E	46	THR
4	E	58	LEU
5	F	98	VAL
5	F	100	MET
5	F	102	MET
5	F	154	GLU
5	F	267	ASP
5	F	297	MET
5	F	301	ASN
5	F	306	PHE
5	F	310	GLU
5	F	335	GLU
5	F	341	LEU
5	F	395	THR
5	F	401	PHE
5	F	417	ASP
5	F	422	ARG
5	F	429	THR
5	F	437	GLN
5	F	445	ASP
5	F	449	THR
5	F	450	ILE

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Mol	Chain	Res	Type
5	F	471	LEU
5	F	472	GLN
5	F	479	THR
5	F	482	GLU
5	F	485	GLU
5	F	486	ARG
5	F	488	LEU
5	F	489	MET
5	F	491	GLU
5	F	492	ASP
5	F	502	LYS
5	F	508	GLU
5	F	530	LEU
5	F	547	VAL
5	F	558	VAL
5	F	561	MET
5	F	566	ASP
5	F	568	ASN
5	F	572	THR
5	F	573	LEU
5	F	580	PHE
5	F	587	ILE
5	F	606	VAL
1	G	13	LEU
1	G	58	GLU
1	G	65	LEU
1	G	79	LEU
1	G	124	VAL
1	G	133	LEU
1	G	160	HIS
1	G	161	SER
1	G	163	GLU
1	G	171	LEU
1	G	176	CYS
1	G	193	GLU
1	H	8	PHE
1	H	18	GLN
1	H	27	THR
1	H	29	GLU
1	H	58	GLU
1	H	60	GLU
1	H	65	LEU

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Mol	Chain	Res	Type
1	H	75	GLN
1	H	79	LEU
1	H	80	GLU
1	H	97	GLU
1	H	107	ILE
1	H	110	VAL
1	H	124	VAL
1	H	134	THR
1	H	171	LEU
1	H	183	ILE
1	H	193	GLU
2	I	4	SER
2	I	11	ILE
2	I	22	LEU
2	I	39	ILE
2	I	46	GLN
2	I	60	GLN
2	I	70	TYR
2	I	82	VAL
2	I	85	CYS
2	I	90	VAL
2	I	91	THR
2	I	115	LYS
2	I	116	ASP
2	I	117	ILE
2	I	118	LYS
2	I	119	GLU
2	I	121	GLU
2	I	132	ASP
2	I	167	SER
2	I	189	ASP
2	I	285	ILE
2	I	299	LYS
2	I	306	THR
2	I	320	ASP
2	I	360	LEU
2	I	369	MET
2	I	377	THR
2	I	394	ARG
2	I	419	ILE
2	I	423	ASP
2	I	434	ASP

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Mol	Chain	Res	Type
2	I	445	ILE
2	I	484	LEU
2	I	485	ASP
2	I	486	THR
2	I	490	GLN
2	I	493	ILE
2	I	496	LYS
2	I	514	PHE
2	I	538	LEU
2	I	539	THR
2	I	542	ARG
2	I	554	HIS
2	I	589	THR
2	I	604	HIS
2	I	607	SER
2	I	609	ILE
2	I	615	VAL
2	I	620	ASN
2	I	623	LEU
2	I	633	LEU
2	I	639	LYS
2	I	657	THR
2	I	672	GLU
2	I	680	LEU
2	I	684	ASN
2	I	692	THR
2	I	697	LYS
2	I	705	GLU
2	I	714	VAL
2	I	748	ILE
2	I	757	THR
2	I	773	LEU
2	I	781	ASP
2	I	788	SER
2	I	799	ASN
2	I	800	MET
2	I	814	ASP
2	I	819	SER
2	I	826	ASP
2	I	840	SER
2	I	859	GLU
2	I	878	THR

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Mol	Chain	Res	Type
2	I	890	LYS
2	I	892	GLU
2	I	895	LEU
2	I	944	ARG
2	I	946	LEU
2	I	951	MET
2	I	974	ARG
2	I	984	VAL
2	I	992	LEU
2	I	1002	LEU
2	I	1006	GLU
2	I	1040	ASP
2	I	1073	LYS
2	I	1082	ILE
2	I	1083	GLU
2	I	1108	ASN
2	I	1109	ILE
2	I	1114	GLU
2	I	1134	GLN
2	I	1136	GLN
2	I	1146	GLN
2	I	1151	LEU
2	I	1156	ARG
2	I	1159	VAL
2	I	1198	LEU
2	I	1210	ILE
2	I	1237	HIS
2	I	1238	LEU
2	I	1264	GLN
2	I	1265	PHE
2	I	1310	ASP
2	I	1327	LEU
2	I	1331	ARG
2	I	1341	ASP
2	I	1342	GLU
3	J	18	ASP
3	J	26	SER
3	J	29	MET
3	J	46	TYR
3	J	54	ASP
3	J	79	LYS
3	J	84	ILE

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Mol	Chain	Res	Type
3	J	94	GLN
3	J	95	THR
3	J	98	ARG
3	J	159	ILE
3	J	169	LEU
3	J	172	PHE
3	J	175	GLU
3	J	217	LEU
3	J	252	LEU
3	J	312	ARG
3	J	324	LEU
3	J	330	MET
3	J	334	LYS
3	J	352	ARG
3	J	363	LEU
3	J	374	LEU
3	J	394	ILE
3	J	425	ARG
3	J	430	HIS
3	J	454	CYS
3	J	490	ILE
3	J	506	VAL
3	J	513	MET
3	J	514	THR
3	J	523	GLU
3	J	536	LEU
3	J	545	HIS
3	J	547	ARG
3	J	567	THR
3	J	568	SER
3	J	573	THR
3	J	641	ILE
3	J	646	ILE
3	J	660	GLU
3	J	661	VAL
3	J	678	ARG
3	J	680	ASN
3	J	683	ILE
3	J	685	ILE
3	J	697	MET
3	J	698	MET
3	J	701	LEU

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Mol	Chain	Res	Type
3	J	702	GLN
3	J	707	ILE
3	J	708	ASN
3	J	710	ASP
3	J	712	GLN
3	J	717	VAL
3	J	720	ASN
3	J	740	LEU
3	J	746	LEU
3	J	754	ILE
3	J	764	ARG
3	J	770	LEU
3	J	788	LEU
3	J	798	ARG
3	J	805	GLN
3	J	810	THR
3	J	844	THR
3	J	847	ASP
3	J	848	VAL
3	J	849	LEU
3	J	853	THR
3	J	857	LEU
3	J	858	VAL
3	J	860	ARG
3	J	881	LYS
3	J	897	HIS
3	J	908	ILE
3	J	918	ILE
3	J	1155	ILE
3	J	1163	VAL
3	J	1170	LYS
3	J	1177	ILE
3	J	1186	TYR
3	J	1194	ARG
3	J	1202	GLU
3	J	1221	LEU
3	J	1255	VAL
3	J	1273	ASP
3	J	1274	PHE
3	J	1275	LEU
3	J	1278	GLU
3	J	1281	GLU

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Mol	Chain	Res	Type
3	J	1284	ARG
3	J	1285	VAL
3	J	1289	ASN
3	J	1293	GLU
3	J	1298	VAL
3	J	1333	THR
3	J	1343	GLU
4	K	13	ILE
4	K	39	VAL
4	K	46	THR
4	K	58	LEU
5	L	98	VAL
5	L	100	MET
5	L	102	MET
5	L	154	GLU
5	L	247	GLU
5	L	266	PHE
5	L	267	ASP
5	L	297	MET
5	L	301	ASN
5	L	306	PHE
5	L	310	GLU
5	L	335	GLU
5	L	341	LEU
5	L	395	THR
5	L	401	PHE
5	L	417	ASP
5	L	422	ARG
5	L	429	THR
5	L	437	GLN
5	L	445	ASP
5	L	449	THR
5	L	450	ILE
5	L	471	LEU
5	L	472	GLN
5	L	479	THR
5	L	485	GLU
5	L	486	ARG
5	L	488	LEU
5	L	489	MET
5	L	491	GLU
5	L	492	ASP

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Mol	Chain	Res	Type
5	L	502	LYS
5	L	508	GLU
5	L	530	LEU
5	L	547	VAL
5	L	558	VAL
5	L	561	MET
5	L	566	ASP
5	L	568	ASN
5	L	572	THR
5	L	573	LEU
5	L	580	PHE
5	L	587	ILE
5	L	603	ARG
5	L	606	VAL
5	L	613	ASP

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (78) such sidechains are listed below:

Mol	Chain	Res	Type
2	C	69	GLN
2	C	120	GLN
2	C	139	ASN
2	C	343	HIS
2	C	494	ASN
2	C	628	HIS
2	C	761	GLN
2	C	799	ASN
2	C	1108	ASN
2	C	1111	GLN
2	C	1116	HIS
2	C	1136	GLN
2	C	1146	GLN
2	C	1237	HIS
2	C	1288	GLN
2	C	1299	ASN
2	C	1307	ASN
2	C	1313	HIS
2	C	1314	GLN
3	D	94	GLN
3	D	200	GLN
3	D	340	GLN
3	D	365	GLN

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Mol	Chain	Res	Type
3	D	450	HIS
3	D	594	GLN
3	D	669	GLN
3	D	702	GLN
3	D	716	GLN
3	D	907	HIS
3	D	910	ASN
3	D	929	GLN
3	D	1218	HIS
3	D	1227	HIS
5	F	131	GLN
5	F	362	ASN
5	F	396	ASN
5	F	406	GLN
5	F	446	GLN
5	F	472	GLN
5	F	518	HIS
1	G	41	ASN
1	H	132	HIS
2	I	139	ASN
2	I	343	HIS
2	I	494	ASN
2	I	628	HIS
2	I	658	GLN
2	I	688	GLN
2	I	760	ASN
2	I	761	GLN
2	I	1116	HIS
2	I	1146	GLN
2	I	1220	GLN
2	I	1314	GLN
3	J	94	GLN
3	J	200	GLN
3	J	206	ASN
3	J	294	ASN
3	J	364	HIS
3	J	365	GLN
3	J	419	HIS
3	J	560	ASN
3	J	702	GLN
3	J	716	GLN
3	J	817	HIS

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Mol	Chain	Res	Type
3	J	910	ASN
3	J	929	GLN
3	J	1259	GLN
3	J	1268	ASN
3	J	1279	GLN
3	J	1366	HIS
4	K	7	GLN
5	L	129	GLN
5	L	227	GLN
5	L	446	GLN
5	L	455	HIS
5	L	472	GLN
5	L	600	HIS

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 carbohydrates in this entry.

5.6 Ligand geometry

Of 6 ligands modelled in this entry, 6 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

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	A	309/329 (93%)	-0.31	2 (0%) 89 81	99, 147, 225, 245	0
1	B	217/329 (65%)	-0.01	6 (2%) 53 37	112, 194, 254, 272	0
1	G	224/329 (68%)	-0.07	3 (1%) 77 63	163, 206, 241, 270	0
1	H	217/329 (65%)	0.07	13 (5%) 21 12	146, 213, 252, 285	0
2	C	1340/1342 (99%)	-0.35	21 (1%) 72 57	74, 121, 234, 285	0
2	I	1340/1342 (99%)	-0.16	48 (3%) 42 28	86, 159, 261, 388	0
3	D	1166/1407 (82%)	-0.30	14 (1%) 79 66	72, 112, 215, 264	0
3	J	1155/1407 (82%)	-0.22	24 (2%) 63 48	86, 138, 229, 274	0
4	E	89/91 (97%)	-0.02	2 (2%) 62 45	147, 183, 216, 241	0
4	K	79/91 (86%)	0.79	14 (17%) 1 1	202, 277, 319, 350	0
5	F	467/613 (76%)	-0.23	12 (2%) 56 40	93, 165, 290, 340	0
5	L	469/613 (76%)	-0.29	7 (1%) 73 60	116, 178, 288, 353	0
All	All	7072/8222 (86%)	-0.22	166 (2%) 60 44	72, 147, 251, 388	0

All (166) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
2	I	982	GLY	9.1
3	D	335	GLN	6.4
2	I	1001	GLY	5.5
1	B	160	HIS	5.0
2	I	1000	LEU	5.0
3	J	208	THR	4.7
2	C	1002	LEU	4.6
2	I	983	GLY	4.5
2	I	981	ALA	4.5
2	C	251	ALA	4.4
5	L	489	MET	4.4

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Mol	Chain	Res	Type	RSRZ
2	C	1003	THR	4.4
2	I	998	LEU	4.4
2	C	231	GLU	4.4
2	C	1001	GLY	4.3
2	I	979	LEU	4.3
5	F	319	ALA	4.2
2	I	999	GLU	4.2
2	I	1002	LEU	4.2
3	D	712	GLN	4.1
5	F	326	TRP	4.1
5	F	323	ASN	4.0
2	I	414	ILE	4.0
3	J	218	THR	3.9
1	H	96	ASP	3.8
4	E	2	ALA	3.8
2	C	319	LEU	3.8
4	K	36	ASP	3.7
4	K	72	GLN	3.7
2	C	1000	LEU	3.7
5	L	490	PRO	3.6
4	K	33	GLY	3.6
2	I	1004	ASP	3.6
3	J	931	THR	3.5
3	D	1202	GLU	3.5
1	H	135	ASP	3.5
2	I	105	TYR	3.4
4	K	37	PRO	3.4
2	I	987	GLU	3.3
5	L	111	LEU	3.3
1	H	106	GLY	3.3
2	I	985	GLU	3.2
3	J	542	ALA	3.2
2	I	266	GLY	3.2
2	I	1007	LYS	3.2
5	L	425	TYR	3.2
2	I	1010	GLN	3.2
2	I	984	VAL	3.1
2	I	1003	THR	3.1
5	F	318	ALA	3.1
1	H	72	GLU	3.1
1	H	97	GLU	3.1
3	J	675	ALA	3.1

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Mol	Chain	Res	Type	RSRZ
4	K	40	PRO	3.1
1	B	172	LEU	3.0
5	F	338	HIS	3.0
4	K	26	ARG	3.0
2	I	986	ALA	3.0
2	I	727	VAL	3.0
3	J	528	THR	2.9
2	C	1004	ASP	2.9
3	J	1296	GLY	2.9
5	L	315	TRP	2.9
5	F	325	PRO	2.9
2	I	975	ILE	2.9
2	I	972	PHE	2.9
3	J	712	GLN	2.9
3	J	830	ASP	2.9
2	C	893	THR	2.8
4	K	2	ALA	2.9
2	C	258	ASN	2.8
1	B	69	SER	2.8
2	C	267	ARG	2.8
2	I	978	VAL	2.8
1	B	70	THR	2.8
3	D	1204	VAL	2.8
3	D	218	THR	2.7
3	J	1297	LYS	2.7
5	F	167	ASP	2.7
2	I	1005	GLU	2.7
5	F	301	ASN	2.7
2	I	973	SER	2.7
2	I	751	TYR	2.7
1	B	67	GLU	2.7
2	I	1006	GLU	2.6
2	I	1316	GLU	2.6
3	D	1161	GLY	2.6
3	J	1295	ASN	2.6
2	I	375	PRO	2.5
2	I	912	ASP	2.5
2	I	267	ARG	2.5
2	C	317	LEU	2.5
3	D	1172	LYS	2.5
3	J	335	GLN	2.5
5	L	167	ASP	2.5

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Mol	Chain	Res	Type	RSRZ
2	C	247	ARG	2.5
3	D	830	ASP	2.5
3	D	207	GLU	2.5
3	D	518	VAL	2.5
3	J	564	VAL	2.5
1	H	66	HIS	2.5
4	K	35	LYS	2.4
2	I	111	GLU	2.4
3	D	826	ILE	2.4
3	J	826	ILE	2.4
2	I	165	HIS	2.4
2	I	725	GLN	2.4
2	I	169	LYS	2.4
3	J	1249	ASN	2.4
2	I	969	ALA	2.4
2	I	1009	ASN	2.3
1	G	194	GLN	2.3
5	F	283	GLN	2.3
2	C	318	SER	2.3
2	I	1020	GLU	2.3
5	F	332	ASP	2.3
1	G	164	ASP	2.3
3	D	208	THR	2.3
2	C	232	ILE	2.3
2	I	1008	GLN	2.3
3	D	217	LEU	2.3
4	K	41	GLU	2.2
1	H	14	VAL	2.2
1	H	27	THR	2.2
4	K	13	ILE	2.2
2	I	988	LYS	2.2
1	H	74	VAL	2.2
2	C	257	ALA	2.2
4	E	34	GLY	2.2
1	B	91	ARG	2.2
4	K	77	ALA	2.2
4	K	14	GLY	2.2
1	A	245	GLU	2.2
2	I	247	ARG	2.2
3	J	1202	GLU	2.2
4	K	58	LEU	2.2
1	H	13	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
1	G	193	GLU	2.2
2	C	164	THR	2.2
3	J	207	GLU	2.2
5	F	307	THR	2.1
5	L	304	THR	2.1
1	H	107	ILE	2.1
3	D	1201	GLY	2.1
2	C	271	ALA	2.1
5	F	293	GLU	2.1
2	I	234	ASP	2.1
1	A	274	ALA	2.1
2	I	720	ARG	2.1
3	J	1161	GLY	2.1
2	C	999	GLU	2.1
3	J	557	LYS	2.1
3	J	674	THR	2.1
3	J	732	GLY	2.1
2	I	185	ASP	2.1
2	I	67	GLU	2.1
2	I	373	GLY	2.1
3	J	1198	VAL	2.0
4	K	32	VAL	2.0
1	H	86	LYS	2.0
2	I	1141	LEU	2.0
2	C	165	HIS	2.0
2	C	243	PRO	2.0
3	J	1204	VAL	2.0
1	H	233	ASP	2.0
3	J	708	ASN	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (i)

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

6.3 Carbohydrates (i)

There are no carbohydrates in this entry.

6.4 Ligands

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
7	ZN	D	1502	1/1	0.81	0.13	134,134,134,134	0
6	MG	J	1501	1/1	0.92	0.35	94,94,94,94	0
6	MG	D	1501	1/1	0.94	0.54	87,87,87,87	0
7	ZN	J	1503	1/1	0.95	0.09	97,97,97,97	0
7	ZN	J	1502	1/1	0.97	0.02	131,131,131,131	0
7	ZN	D	1503	1/1	0.99	0.06	51,51,51,51	0

6.5 Other polymers

There are no such residues in this entry.