Full wwPDB X-ray Structure Validation Report ⓘ

Jan 20, 2024 – 01:31 pm GMT

PDB ID	:	7NIT
Title	:	X-ray structure of a multidomain BbgIII from Bifidobacterium bifidum
Authors	:	Moroz, O.V.; Blagova, E.; Lebedev, A.A.; Sanchez Rodriguez, F.; Rigden, D.J.; Tams, J.W.; Wilting, R.; Vester, J.K.; Longhin, E.; Krogh, K.B.R.; Pache, R.A.; Davies, G.J.; Wilson, K.S.
Deposited on	:	2021-02-14
Resolution	:	2.89 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 types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

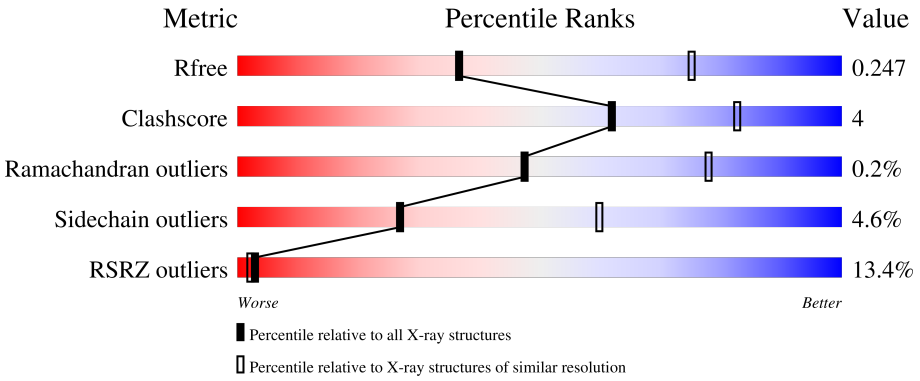
MolProbity	:	4.02b-467
Mogul	:	1.8.4, CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.36
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

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 2.89 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	1957 (2.90-2.90)
Clashscore	141614	2172 (2.90-2.90)
Ramachandran outliers	138981	2115 (2.90-2.90)
Sidechain outliers	138945	2117 (2.90-2.90)
RSRZ outliers	127900	1906 (2.90-2.90)

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 of 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	1304	6% 84% 10% • 5%
1	B	1304	7% 82% 12% • 5%
1	C	1304	9% 83% 11% • 5%
1	D	1304	8% 84% 11% • •
1	E	1304	20% 83% 11% • 5%

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Mol	Chain	Length	Quality of chain
1	F	1304	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
3	GOL	B	2302	-	-	X	-
3	GOL	F	2302	-	-	X	-

2 Entry composition (i)

There are 5 unique types of molecules in this entry. The entry contains 55867 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.

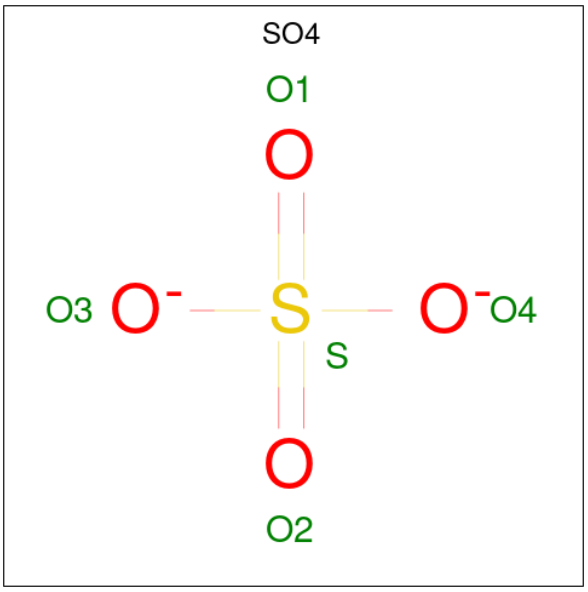
- Molecule 1 is a protein called Beta-galactosidase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	1239	Total	C	N	O	S	0	0	0
			9306	5807	1585	1897	17			
1	B	1235	Total	C	N	O	S	0	0	0
			9246	5768	1574	1888	16			
1	C	1243	Total	C	N	O	S	0	0	0
			9326	5818	1585	1906	17			
1	D	1253	Total	C	N	O	S	0	0	0
			9390	5856	1601	1916	17			
1	E	1235	Total	C	N	O	S	0	0	0
			9195	5733	1567	1879	16			
1	F	1244	Total	C	N	O	S	0	0	0
			9324	5816	1586	1905	17			

There are 6 discrepancies between the modelled and reference sequences:

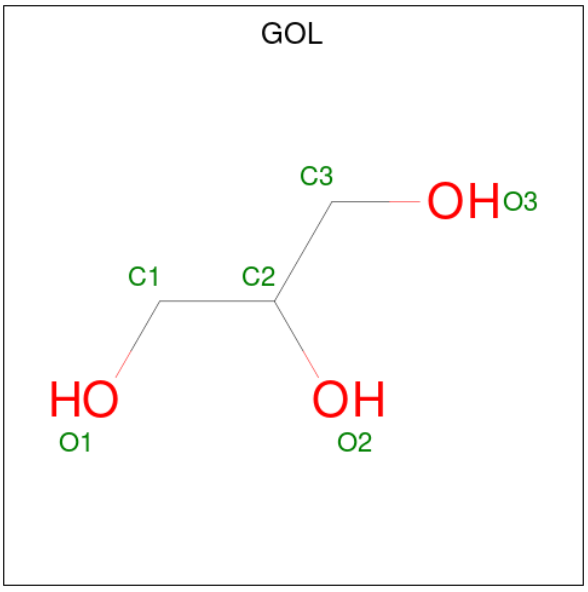
Chain	Residue	Modelled	Actual	Comment	Reference
A	1165	GLU	ASP	conflict	UNP A0A415C3Q2
B	1165	GLU	ASP	conflict	UNP A0A415C3Q2
C	1165	GLU	ASP	conflict	UNP A0A415C3Q2
D	1165	GLU	ASP	conflict	UNP A0A415C3Q2
E	1165	GLU	ASP	conflict	UNP A0A415C3Q2
F	1165	GLU	ASP	conflict	UNP A0A415C3Q2

- Molecule 2 is SULFATE ION (three-letter code: SO4) (formula: O_4S).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	A	1	Total O S 5 4 1	0	0
2	C	1	Total O S 5 4 1	0	0
2	D	1	Total O S 5 4 1	0	0
2	F	1	Total O S 5 4 1	0	0

- Molecule 3 is GLYCEROL (three-letter code: GOL) (formula: $C_3H_8O_3$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
3	A	1	Total C O 6 3 3	0	0
3	A	1	Total C O 6 3 3	0	0
3	B	1	Total C O 6 3 3	0	0
3	C	1	Total C O 6 3 3	0	0
3	D	1	Total C O 6 3 3	0	0
3	D	1	Total C O 6 3 3	0	0
3	E	1	Total C O 6 3 3	0	0
3	F	1	Total C O 6 3 3	0	0

- Molecule 4 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
4	A	1	Total Ca 1 1	0	0
4	B	1	Total Ca 1 1	0	0
4	C	1	Total Ca 1 1	0	0
4	D	1	Total Ca 1 1	0	0
4	E	1	Total Ca 1 1	0	0
4	F	1	Total Ca 1 1	0	0

- Molecule 5 is water.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	A	1	Total O 1 1	0	0
5	B	1	Total O 1 1	0	0
5	C	1	Total O 1 1	0	0
5	D	1	Total O 1 1	0	0

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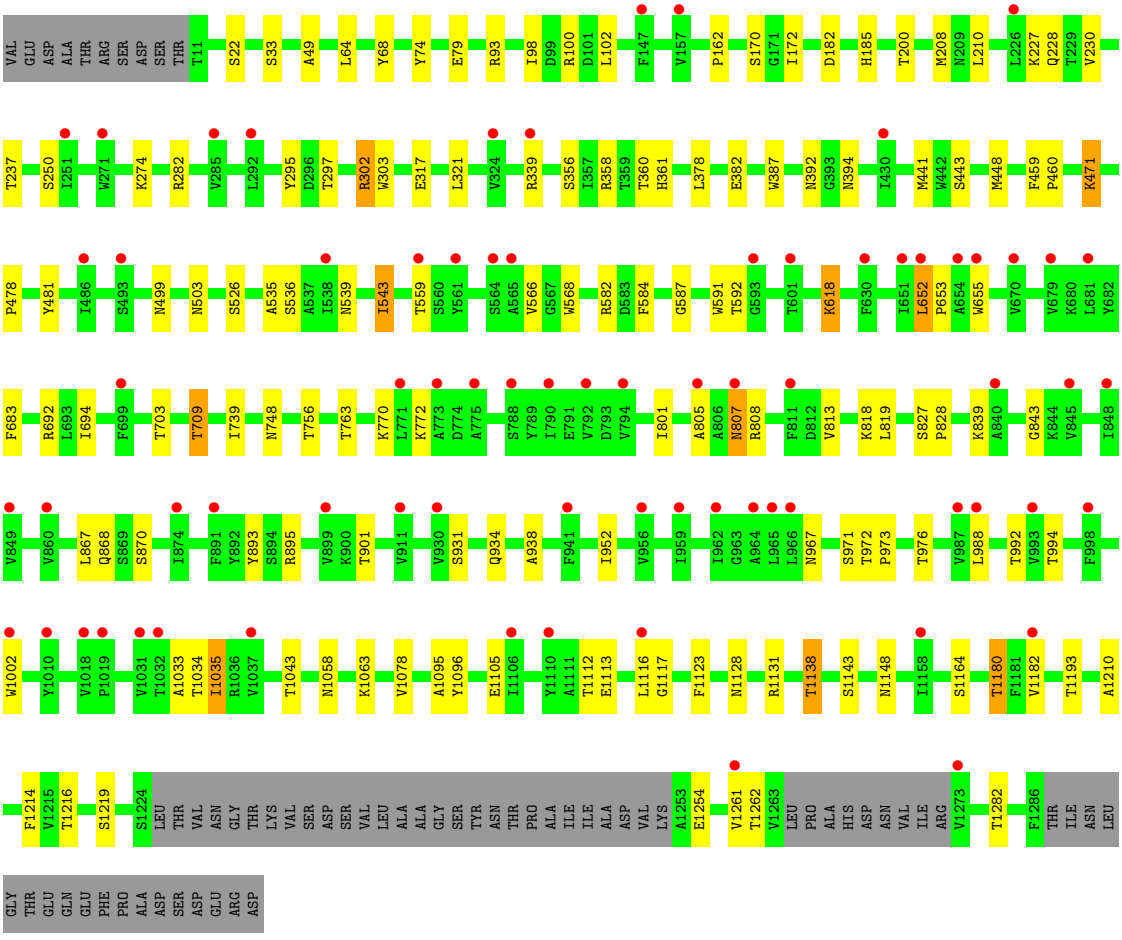
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
5	E	1	Total O 1 1	0	0
5	F	1	Total O 1 1	0	0

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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.

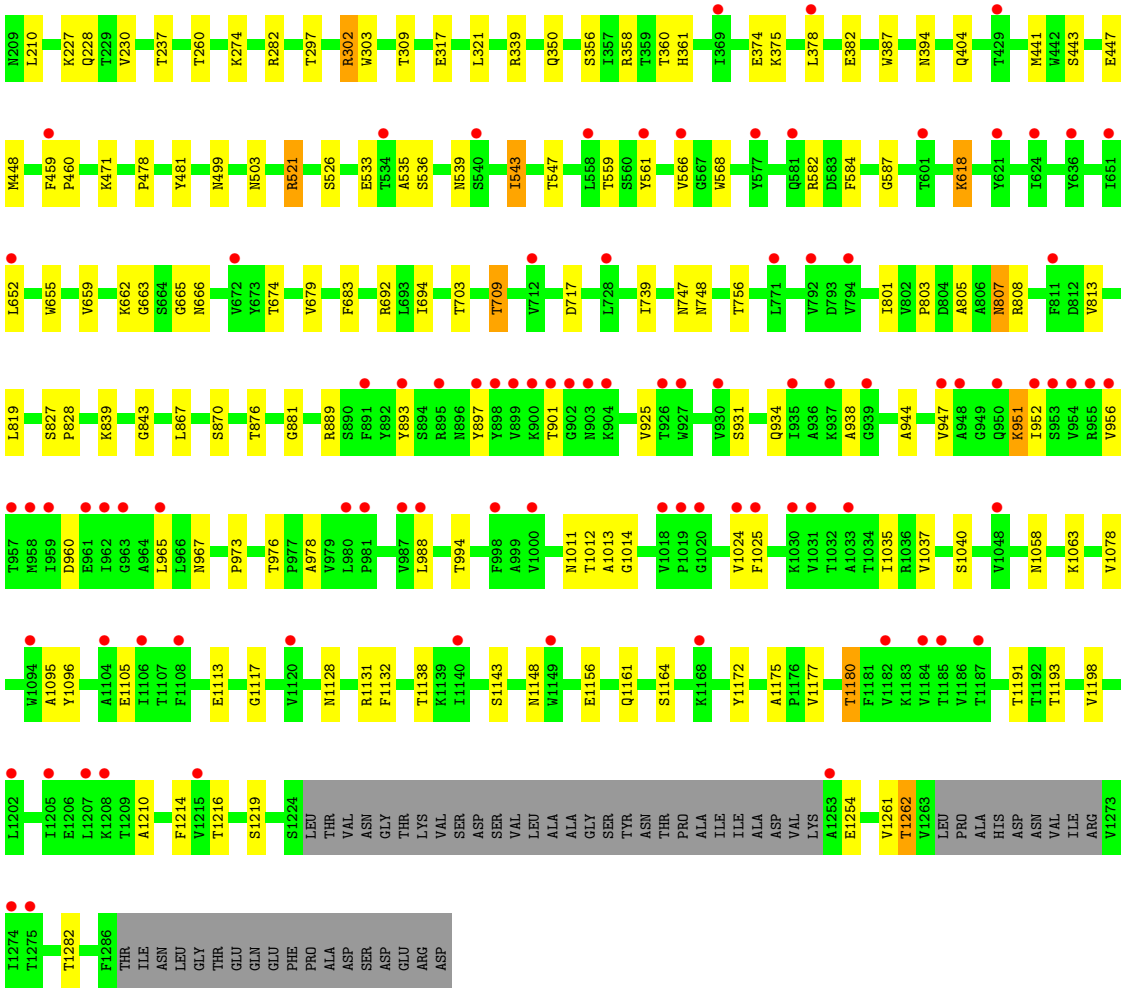
• Molecule 1: Beta-galactosidase

Chain A:



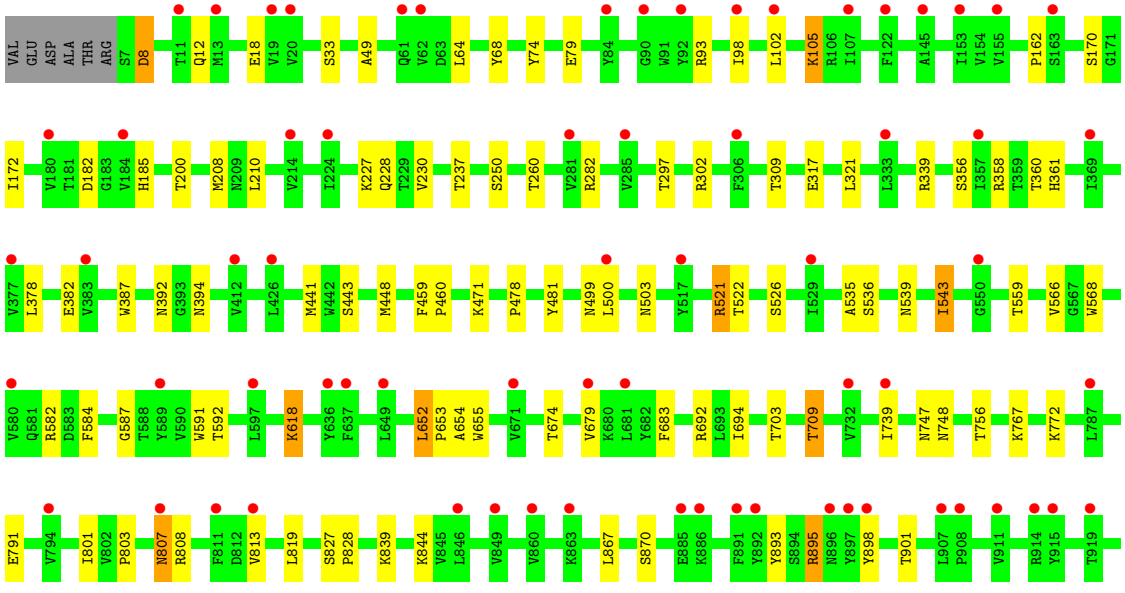
• Molecule 1: Beta-galactosidase

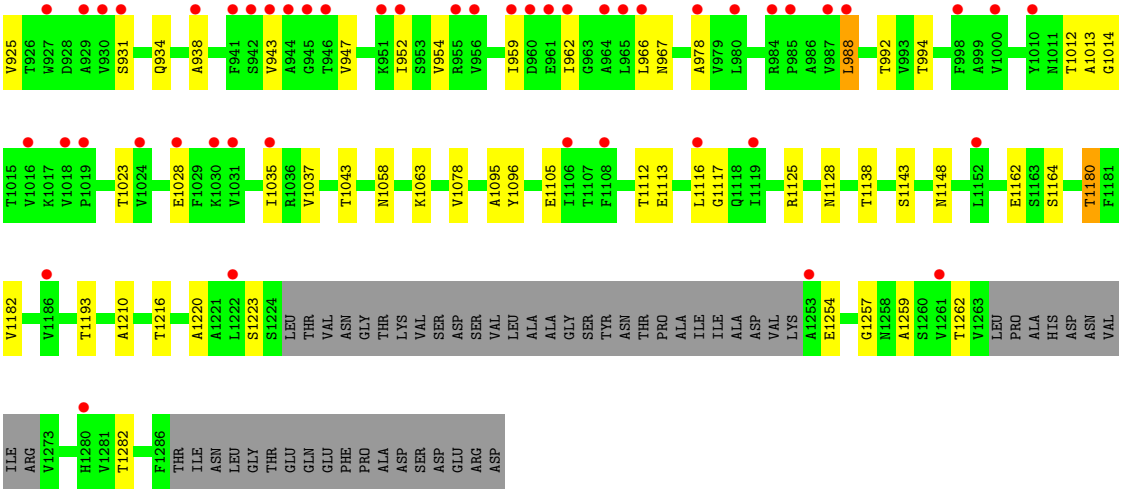
Chain B:



• Molecule 1: Beta-galactosidase

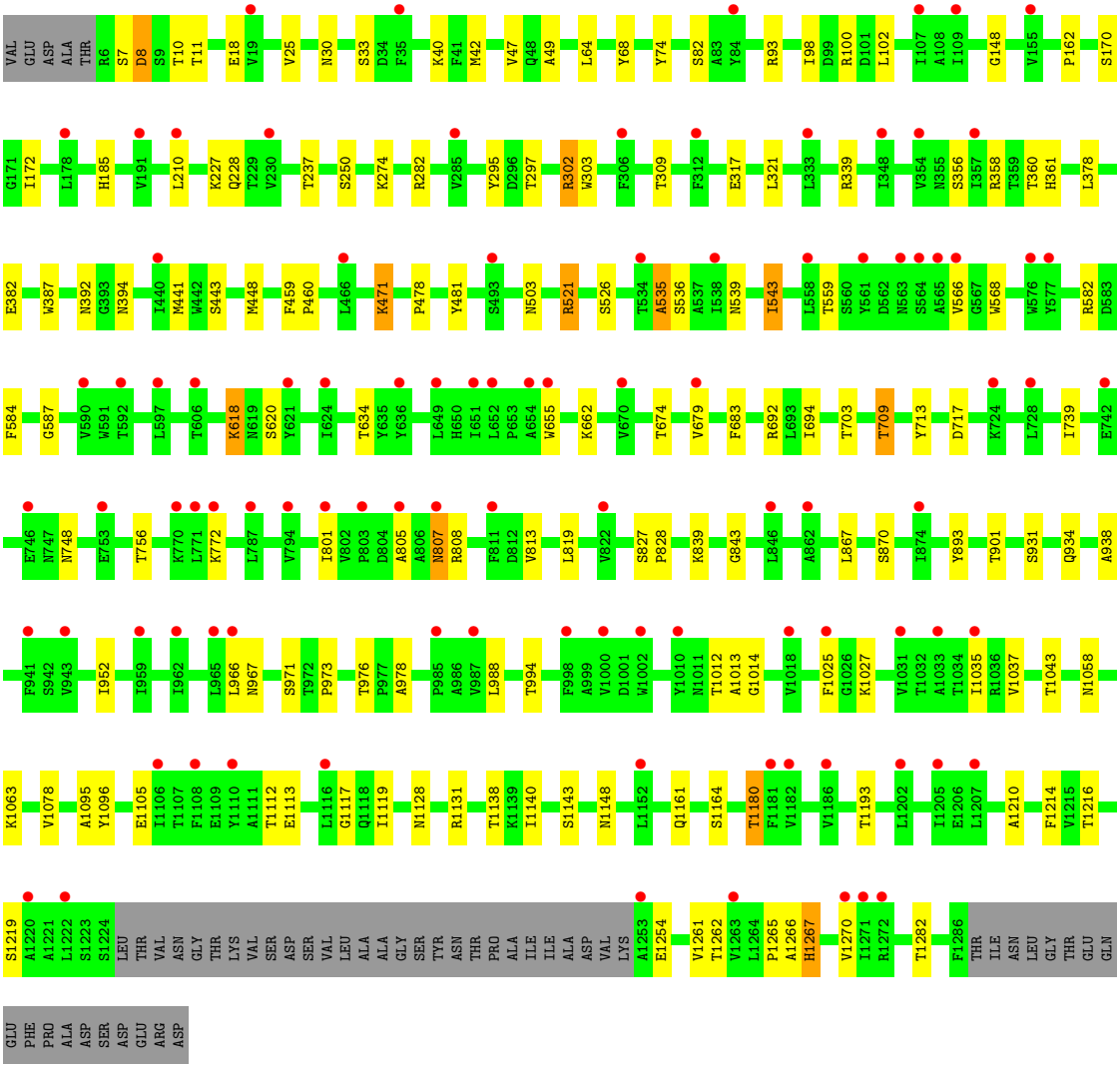
Chain C:





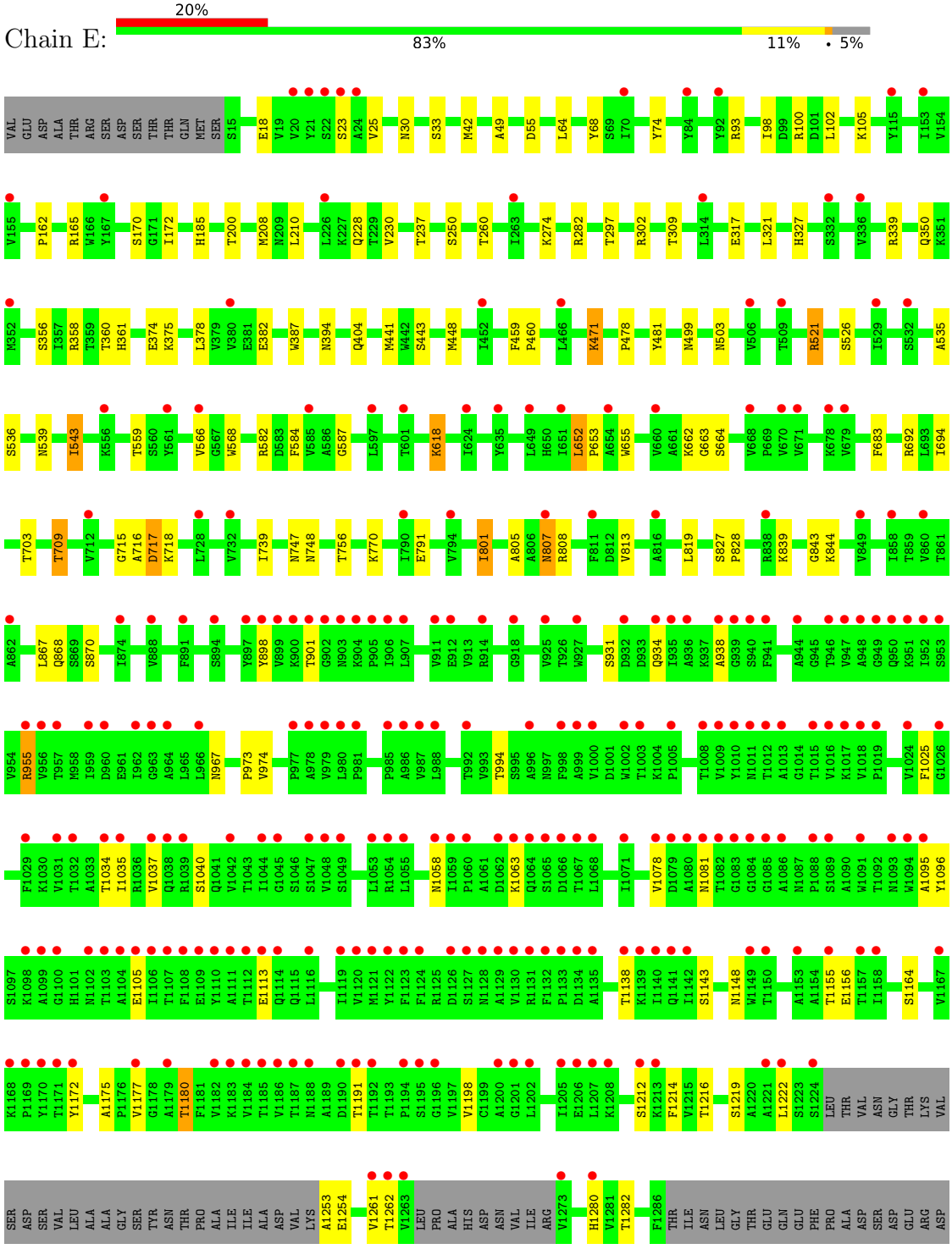
• Molecule 1: Beta-galactosidase

Chain D:



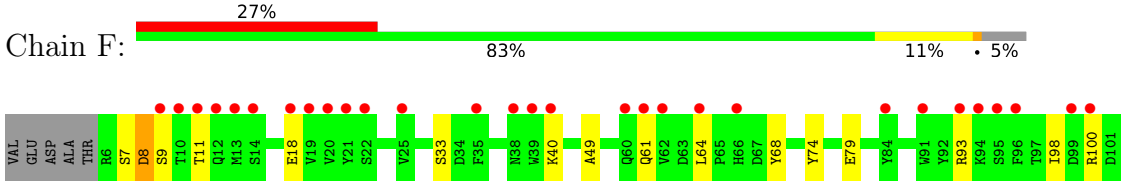
• Molecule 1: Beta-galactosidase

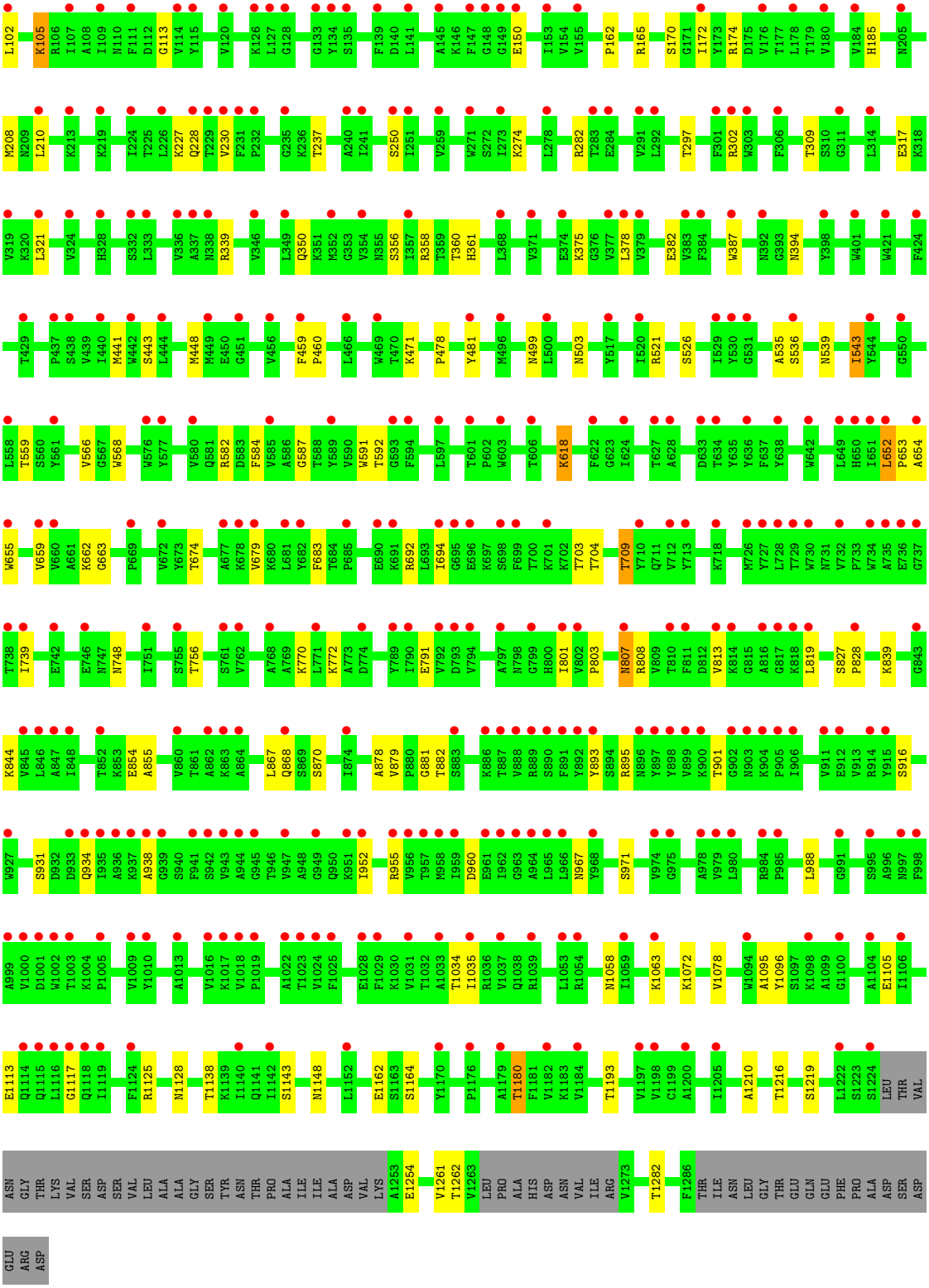
Chain E:



• Molecule 1: Beta-galactosidase

Chain F:




L102 K105 R106 I107 A108 I109 N110 F111 D112 G113 V114 Y115 V120 K126 L127 G128 G133 Y134 S135 F139 D140 L141 A145 K146 F147 G148 G149 E150 I153 V154 V155 P162 R165 S170 G171 I172 Y173 R174 D175 V176 T177 L178 T179 V180 V184 H185 N205
M208 N209 L210 K213 K219 I224 T225 L226 K227 Q228 T229 V230 F231 P232 G235 K236 T237 A240 I241 S250 I251 V259 W271 S272 I273 K274 L278 R282 T283 E284 V291 L292 T297 F301 R302 W303 F306 T309 S310 G311 L314 E317 K318
V319 K320 L321 V324 H328 S332 L333 V336 A337 N338 R339 V346 L349 Q350 K351 M352 G353 V354 N355 S356 I357 R358 T359 T360 H361 L368 V371 E374 K375 G376 V377 L378 V379 E382 V383 F384 W387 N392 G393 N394 Y398 W401 W421 F424
T429 P437 S438 V439 I440 M441 W442 S443 L444 N448 M449 E450 G451 V456 F459 P460 L466 W469 T470 K471 P478 Y481 M496 N499 L500 N503 Y517 I520 R521 S526 I529 Y530 G531 A535 S536 N539 I543 Y544 G550
L558 T559 S560 Y561 V566 G567 W568 W576 Y577 V580 Q581 R582 D583 F584 V585 A586 G587 T588 Y589 V590 W591 T592 G593 F594 L597 T601 P602 W603 T606 K618 F622 G623 I624 T627 A628 D633 T634 Y635 Y636 F637 Y638 W642 L649 H650 I651 L652 P653 A654
W655 V659 V660 A661 K662 G663 P669 V672 Y673 T674 A677 K678 V679 K680 L681 Y682 F683 T684 P685 E690 K691 R692 L693 I694 G695 E696 K697 S698 F699 T700 K701 K702 T703 T704 T709 Y710 Q711 V712 Y713 K718 M726 Y727 L728 T729 W730 M731 V732 P733 W734 A735 E736 G737
T738 I739 E742 E746 N747 N748 I751 S755 T756 S761 V762 A768 A769 K770 L771 K772 A773 D774 Y789 I790 E791 V792 D793 V794 A797 N798 G799 H800 I801 V802 P803 N807 R808 V809 T810 F811 D812 V813 K814 G815 A816 G817 K818 L819 S827 P828 K839 G843
K844 V845 L846 A847 I848 T852 K853 E854 A855 V860 T861 A862 K863 A864 L867 Q868 S869 S870 I874 A878 V879 P880 G881 T882 S883 K886 T887 V888 R889 S890 F891 Y892 Y893 S894 R895 N896 Y897 Y898 V899 K900 T901 G902 N903 K904 P905 I906 V911 E912 V913 R914 Y915 S916
W927 S931 D932 D933 Q934 I935 A936 K937 A938 G939 S940 F941 S942 V943 A944 G945 T946 V947 A948 G949 Q950 K951 I952 R955 V956 T957 M958 I959 D960 E961 I962 G963 A964 L965 L966 N967 Y968 S971 V974 G975 A978 V979 L980 R984 P985 L988 G991 S995 A996 N997 F998
A999 V1000 D1001 W1002 T1003 K1004 P1005 V1009 Y1010 A1013 V1016 K1017 V1018 P1019 A1022 T1023 V1024 F1025 E1028 F1029 K1030 V1031 T1032 A1033 T1034 I1035 R1036 V1037 Q1038 R1039 L1053 R1054 N1058 I1059 K1063 K1072 V1078 W1094 A1095 Y1096 S1097 K1098 A1099 G1100 A1104 E1105 I1106
E1113 Q1114 Q1115 L1116 G1117 Q1118 I1119 F1124 R1125 N1128 T1138 K1139 I1140 Q1141 I1142 S1143 N1148 L1152 E1162 S1163 S1164 Y1170 P1176 A1179 T1180 F1181 V1182 K1183 V1184 T1193 V1197 V1198 C1199 A1200 I1205 A1210 T1216 S1219 L1222 S1223 S1224 LEU THR VAL
ASN GLY THR LYS VAL SER ASP SER VAL LEU ALA ALA GLY SER TYR ASN THR PRO ALA ILE ILE ALA ASP VAL LYS A1253 E1254 V1261 T1262 V1263 LEU PRO ALA HIS ASP ASN VAL ILE ARG V1273 T1282 F1286 THR ILE ASN LEU GLY THR GLU GLN GLU PHE PRO ALA ASP SER ASP
GLU ARG ASP

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1	Depositor
Cell constants a, b, c, α, β, γ	116.95Å 130.04Å 200.58Å 86.99° 84.83° 83.79°	Depositor
Resolution (Å)	199.58 – 2.89 199.58 – 2.89	Depositor EDS
% Data completeness (in resolution range)	96.2 (199.58-2.89) 96.2 (199.58-2.89)	Depositor EDS
R_{merge}	0.09	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.13 (at 2.91Å)	Xtriage
Refinement program	REFMAC 5.8.0267	Depositor
R, R_{free}	0.214 , 0.247 0.214 , 0.247	Depositor DCC
R_{free} test set	12571 reflections (4.98%)	wwPDB-VP
Wilson B-factor (Å^2)	88.8	Xtriage
Anisotropy	0.320	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.32 , 69.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.51$, $< L^2 > = 0.34$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	55867	wwPDB-VP
Average B, all atoms (Å^2)	114.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 4.81% 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: GOL, SO4, CA

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	0.36	0/9503	0.71	0/12962
1	B	0.39	0/9443	0.73	0/12889
1	C	0.37	0/9523	0.71	0/12990
1	D	0.36	0/9589	0.71	0/13082
1	E	0.36	0/9390	0.70	0/12825
1	F	0.33	0/9521	0.68	0/12990
All	All	0.36	0/56969	0.70	0/77738

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	9306	0	8880	70	0
1	B	9246	0	8784	92	0
1	C	9326	0	8895	93	0
1	D	9390	0	8946	82	0
1	E	9195	0	8696	73	0
1	F	9324	0	8877	74	0
2	A	5	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	C	5	0	0	0	0
2	D	5	0	0	0	0
2	F	5	0	0	0	0
3	A	12	0	16	0	0
3	B	6	0	8	5	0
3	C	6	0	8	0	0
3	D	12	0	16	0	0
3	E	6	0	8	1	0
3	F	6	0	8	9	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0
4	D	1	0	0	0	0
4	E	1	0	0	0	0
4	F	1	0	0	0	0
5	A	1	0	0	0	0
5	B	1	0	0	0	0
5	C	1	0	0	0	0
5	D	1	0	0	0	0
5	E	1	0	0	0	0
5	F	1	0	0	0	0
All	All	55867	0	53142	474	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 4.

All (474) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:879:VAL:HB	1:F:882:THR:HG23	1.33	1.06
1:C:1023:THR:HG22	1:C:1028:GLU:HG3	1.52	0.91
1:C:959:ILE:HG21	1:C:962:ILE:HD11	1.59	0.85
1:B:1014:GLY:O	1:B:1037:VAL:HG22	1.79	0.82
1:E:1155:THR:HG22	1:F:704:THR:HA	1.65	0.79
1:C:1014:GLY:O	1:C:1037:VAL:HG22	1.83	0.79
1:D:1014:GLY:O	1:D:1037:VAL:HG22	1.81	0.79
1:C:1023:THR:CG2	1:C:1028:GLU:HG3	2.14	0.77
1:C:959:ILE:HG21	1:C:962:ILE:CD1	2.14	0.77
1:C:1012:THR:O	1:C:1037:VAL:HG21	1.89	0.73
1:D:1012:THR:O	1:D:1037:VAL:HG21	1.88	0.73
1:B:1012:THR:O	1:B:1037:VAL:HG21	1.87	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:988:LEU:HD11	1:A:994:THR:CG2	2.19	0.72
1:F:967:ASN:HB2	1:F:1262:THR:HG22	1.72	0.72
1:C:988:LEU:HD22	1:C:992:THR:HB	1.69	0.72
1:D:1131:ARG:HB3	1:E:747:ASN:ND2	2.05	0.71
1:E:358:ARG:HG2	1:E:360:THR:CG2	2.20	0.71
1:A:1131:ARG:HB3	1:B:747:ASN:ND2	2.05	0.71
1:A:1131:ARG:HB3	1:B:747:ASN:HD21	1.55	0.71
1:B:978:ALA:CB	1:B:1035:ILE:HD13	2.21	0.70
1:F:150:GLU:OE2	1:F:895:ARG:NH1	2.24	0.69
1:D:967:ASN:HB2	1:D:1262:THR:HG22	1.73	0.69
1:E:967:ASN:HB2	1:E:1262:THR:HG22	1.75	0.68
1:D:988:LEU:HD11	1:D:994:THR:CG2	2.24	0.68
1:C:967:ASN:HB2	1:C:1262:THR:HG22	1.76	0.68
1:F:683:PHE:HB2	1:F:694:ILE:HD11	1.76	0.68
1:A:967:ASN:HB2	1:A:1262:THR:HG22	1.74	0.67
1:E:358:ARG:HG2	1:E:360:THR:HG22	1.77	0.67
1:C:162:PRO:HG2	1:C:394:ASN:HA	1.77	0.66
1:D:966:LEU:HD12	1:D:1262:THR:HG21	1.77	0.66
1:C:8:ASP:HB2	1:C:12:GLN:O	1.96	0.65
1:C:683:PHE:HB2	1:C:694:ILE:HD11	1.76	0.65
1:A:162:PRO:HG2	1:A:394:ASN:HA	1.78	0.65
1:D:683:PHE:HB2	1:D:694:ILE:HD11	1.78	0.65
1:E:683:PHE:HB2	1:E:694:ILE:HD11	1.78	0.65
1:E:521:ARG:HG3	1:E:521:ARG:HH11	1.62	0.64
1:F:162:PRO:HG2	1:F:394:ASN:HA	1.78	0.64
1:D:1131:ARG:HB3	1:E:747:ASN:HD21	1.60	0.64
1:B:162:PRO:HG2	1:B:394:ASN:HA	1.80	0.64
1:F:591:TRP:CZ2	3:F:2302:GOL:H2	2.34	0.64
1:A:683:PHE:HB2	1:A:694:ILE:HD11	1.79	0.63
1:D:162:PRO:HG2	1:D:394:ASN:HA	1.80	0.63
1:B:521:ARG:HG3	1:B:521:ARG:HH11	1.64	0.63
1:B:988:LEU:HD11	1:B:994:THR:CG2	2.29	0.63
1:E:339:ARG:HH11	1:E:339:ARG:HG2	1.63	0.63
1:C:978:ALA:CB	1:C:1035:ILE:HD13	2.29	0.62
1:C:1125:ARG:NH1	1:C:1162:GLU:OE2	2.33	0.62
1:F:591:TRP:CH2	3:F:2302:GOL:H2	2.35	0.62
1:E:162:PRO:HG2	1:E:394:ASN:HA	1.80	0.62
1:F:591:TRP:CZ2	3:F:2302:GOL:H32	2.35	0.62
1:A:931:SER:HB3	1:A:934:GLN:HG3	1.80	0.62
1:F:8:ASP:HB3	1:F:11:THR:OG1	2.00	0.62
1:B:683:PHE:HB2	1:B:694:ILE:HD11	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:967:ASN:HB2	1:B:1262:THR:HG22	1.81	0.61
1:E:55:ASP:CG	1:E:955:ARG:NH1	2.53	0.61
1:C:521:ARG:HG3	1:C:521:ARG:HH11	1.66	0.61
1:C:978:ALA:HB3	1:C:1035:ILE:HD13	1.83	0.61
1:B:339:ARG:HG2	1:B:339:ARG:HH11	1.66	0.61
1:D:978:ALA:CB	1:D:1035:ILE:HD13	2.30	0.61
1:B:1191:THR:O	1:B:1198:VAL:HG21	2.02	0.60
1:E:165:ARG:HH22	3:E:2302:GOL:H32	1.66	0.60
1:C:309:THR:HG23	1:C:521:ARG:NH2	2.17	0.60
1:C:339:ARG:HH11	1:C:339:ARG:HG2	1.67	0.60
1:D:8:ASP:HB3	1:D:11:THR:HB	1.84	0.60
1:E:1191:THR:O	1:E:1198:VAL:HG21	2.01	0.60
1:D:988:LEU:N	1:D:988:LEU:HD12	2.16	0.59
1:D:10:THR:HA	1:D:1025:PHE:HB3	1.84	0.59
1:D:521:ARG:HG3	1:D:521:ARG:HH11	1.67	0.59
1:E:387:TRP:CE2	1:E:448:MET:HG2	2.37	0.59
1:B:807:ASN:HD22	1:B:867:LEU:HD11	1.67	0.59
1:C:988:LEU:HD11	1:C:994:THR:CG2	2.33	0.59
1:E:327:HIS:CD2	1:E:360:THR:O	2.56	0.59
1:B:807:ASN:ND2	1:B:867:LEU:HD11	2.17	0.59
1:B:1011:ASN:HB2	1:C:522:THR:HG23	1.84	0.59
1:C:521:ARG:HH11	1:C:521:ARG:CG	2.16	0.59
1:B:931:SER:HB2	1:B:934:GLN:HG3	1.85	0.58
1:C:925:VAL:HG22	1:C:947:VAL:HG21	1.85	0.58
1:C:1220:ALA:HB3	1:C:1259:ALA:HB2	1.85	0.58
1:D:978:ALA:HB3	1:D:1035:ILE:HD13	1.84	0.58
1:F:931:SER:HB2	1:F:934:GLN:HG3	1.85	0.58
1:F:1125:ARG:NH1	1:F:1162:GLU:OE2	2.35	0.58
1:B:361:HIS:NE2	3:B:2302:GOL:H12	2.19	0.58
1:C:931:SER:HB2	1:C:934:GLN:HG3	1.85	0.58
1:A:988:LEU:HD11	1:A:994:THR:HG22	1.84	0.58
1:D:321:LEU:HB2	1:D:587:GLY:HA3	1.86	0.57
1:E:898:TYR:CE2	1:E:994:THR:HB	2.38	0.57
1:A:339:ARG:HG2	1:A:339:ARG:HH11	1.67	0.57
1:E:521:ARG:HH11	1:E:521:ARG:CG	2.17	0.57
1:A:807:ASN:ND2	1:A:867:LEU:HD11	2.20	0.57
1:B:988:LEU:N	1:B:988:LEU:HD12	2.20	0.57
1:D:339:ARG:HG2	1:D:339:ARG:HH11	1.69	0.57
1:E:931:SER:HB2	1:E:934:GLN:HG3	1.86	0.57
1:A:321:LEU:HB2	1:A:587:GLY:HA3	1.86	0.57
1:B:944:ALA:HB1	1:B:951:LYS:HD3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:309:THR:HG23	1:D:521:ARG:NH2	2.19	0.57
1:D:931:SER:HB2	1:D:934:GLN:HG3	1.87	0.57
1:E:807:ASN:ND2	1:E:867:LEU:HD11	2.19	0.57
1:B:521:ARG:HH11	1:B:521:ARG:CG	2.17	0.57
1:F:807:ASN:ND2	1:F:867:LEU:HD11	2.20	0.57
1:D:521:ARG:HH11	1:D:521:ARG:CG	2.18	0.57
1:F:1063:LYS:O	1:F:1095:ALA:HB3	2.05	0.57
1:B:309:THR:HG23	1:B:521:ARG:NH2	2.20	0.56
1:B:813:VAL:HG21	1:B:819:LEU:HB2	1.87	0.56
1:C:807:ASN:HD22	1:C:867:LEU:HD11	1.70	0.56
1:E:309:THR:HG23	1:E:521:ARG:NH2	2.21	0.56
1:A:1063:LYS:O	1:A:1095:ALA:HB3	2.06	0.56
1:C:807:ASN:ND2	1:C:867:LEU:HD11	2.19	0.56
1:B:1131:ARG:HB3	1:C:747:ASN:ND2	2.21	0.56
1:E:655:TRP:CZ2	1:E:739:ILE:HD11	2.40	0.56
1:F:879:VAL:HB	1:F:882:THR:CG2	2.22	0.56
1:D:807:ASN:ND2	1:D:867:LEU:HD11	2.20	0.56
1:D:655:TRP:CZ2	1:D:739:ILE:HD11	2.41	0.56
1:E:807:ASN:HD22	1:E:867:LEU:HD11	1.70	0.56
1:F:807:ASN:HD22	1:F:867:LEU:HD11	1.71	0.56
1:B:1131:ARG:HB3	1:C:747:ASN:HD21	1.70	0.55
1:B:1143:SER:HB3	1:B:1148:ASN:O	2.06	0.55
1:C:1063:LYS:O	1:C:1095:ALA:HB3	2.06	0.55
1:F:339:ARG:HG2	1:F:339:ARG:HH11	1.71	0.55
1:B:925:VAL:HG22	1:B:947:VAL:HG21	1.87	0.55
1:B:321:LEU:HB2	1:B:587:GLY:HA3	1.88	0.55
1:C:655:TRP:CZ2	1:C:739:ILE:HD11	2.41	0.55
1:D:1063:LYS:O	1:D:1095:ALA:HB3	2.06	0.55
1:E:1063:LYS:O	1:E:1095:ALA:HB3	2.06	0.55
1:C:925:VAL:HG22	1:C:947:VAL:CG2	2.37	0.55
1:C:1143:SER:HB3	1:C:1148:ASN:O	2.06	0.55
1:F:655:TRP:CZ2	1:F:739:ILE:HD11	2.42	0.55
1:B:655:TRP:CZ2	1:B:739:ILE:HD11	2.42	0.55
1:A:1143:SER:HB3	1:A:1148:ASN:O	2.07	0.54
1:E:49:ALA:O	1:E:93:ARG:NH1	2.39	0.54
1:F:1143:SER:HB3	1:F:1148:ASN:O	2.08	0.54
1:B:1063:LYS:O	1:B:1095:ALA:HB3	2.06	0.54
1:F:49:ALA:O	1:F:93:ARG:NH1	2.39	0.54
1:D:813:VAL:HG21	1:D:819:LEU:HB2	1.89	0.54
1:C:1220:ALA:HB1	1:C:1257:GLY:H	1.73	0.54
1:A:655:TRP:CZ2	1:A:739:ILE:HD11	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:988:LEU:CD1	1:A:994:THR:HG23	2.37	0.54
1:C:988:LEU:HD11	1:C:994:THR:HG22	1.89	0.54
1:C:321:LEU:HB2	1:C:587:GLY:HA3	1.88	0.54
1:E:321:LEU:HB2	1:E:587:GLY:HA3	1.88	0.54
1:D:1143:SER:HB3	1:D:1148:ASN:O	2.08	0.54
1:D:543:ILE:HG22	1:D:559:THR:HA	1.90	0.53
1:E:543:ILE:HG22	1:E:559:THR:HA	1.91	0.53
1:F:321:LEU:HB2	1:F:587:GLY:HA3	1.89	0.53
1:A:807:ASN:HD22	1:A:867:LEU:HD11	1.72	0.53
1:B:49:ALA:O	1:B:93:ARG:NH1	2.38	0.53
1:B:925:VAL:HG22	1:B:947:VAL:CG2	2.39	0.53
1:F:18:GLU:OE2	1:F:40:LYS:NZ	2.39	0.53
1:F:309:THR:HG23	1:F:521:ARG:NH2	2.24	0.53
1:F:813:VAL:HG21	1:F:819:LEU:HB2	1.89	0.53
1:B:978:ALA:HB3	1:B:1035:ILE:HD13	1.90	0.53
1:C:49:ALA:O	1:C:93:ARG:NH1	2.40	0.53
1:B:1013:ALA:HA	1:B:1037:VAL:HG23	1.91	0.52
1:C:543:ILE:HG22	1:C:559:THR:HA	1.91	0.52
1:D:988:LEU:HD11	1:D:994:THR:HG22	1.91	0.52
1:F:350:GLN:HE22	1:F:375:LYS:HB3	1.75	0.52
1:E:1143:SER:HB3	1:E:1148:ASN:O	2.08	0.52
1:E:55:ASP:CG	1:E:955:ARG:HH12	2.12	0.52
1:C:1013:ALA:HA	1:C:1037:VAL:HG23	1.92	0.52
1:A:543:ILE:HG22	1:A:559:THR:HA	1.92	0.52
1:F:356:SER:HA	1:F:378:LEU:O	2.10	0.52
1:A:813:VAL:HG21	1:A:819:LEU:HB2	1.91	0.51
1:F:591:TRP:CZ2	3:F:2302:GOL:C2	2.92	0.51
1:B:49:ALA:HB1	1:B:93:ARG:HD2	1.92	0.51
1:C:813:VAL:HG21	1:C:819:LEU:HB2	1.92	0.51
1:B:165:ARG:HH22	3:B:2302:GOL:C1	2.23	0.51
1:B:973:PRO:HB3	1:B:1214:PHE:CZ	2.44	0.51
1:D:535:ALA:O	1:D:536:SER:OG	2.29	0.51
1:B:1025:PHE:HD1	1:B:1025:PHE:O	1.93	0.51
1:D:295:TYR:CE2	1:D:297:THR:HG23	2.46	0.51
1:D:807:ASN:HD22	1:D:867:LEU:HD11	1.74	0.51
1:E:49:ALA:HB1	1:E:93:ARG:HD2	1.92	0.51
1:F:543:ILE:HG22	1:F:559:THR:HA	1.92	0.51
1:A:988:LEU:HD12	1:A:988:LEU:N	2.27	0.50
1:B:543:ILE:HG22	1:B:559:THR:HA	1.92	0.50
1:B:566:VAL:HG21	1:B:568:TRP:CE2	2.46	0.50
1:A:49:ALA:O	1:A:93:ARG:NH1	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:350:GLN:HE22	1:E:375:LYS:HB3	1.76	0.50
1:D:49:ALA:O	1:D:93:ARG:NH1	2.40	0.50
1:E:813:VAL:HG21	1:E:819:LEU:HB2	1.93	0.50
1:A:295:TYR:CE2	1:A:297:THR:HG23	2.46	0.50
1:B:356:SER:HA	1:B:378:LEU:O	2.12	0.50
1:C:703:THR:OG1	1:C:709:THR:HB	2.12	0.50
1:C:1058:ASN:HB2	1:C:1105:GLU:H	1.77	0.50
1:D:49:ALA:HB1	1:D:93:ARG:HD2	1.94	0.50
1:D:356:SER:HA	1:D:378:LEU:O	2.12	0.50
1:A:566:VAL:HG21	1:A:568:TRP:CE2	2.46	0.50
1:E:973:PRO:HB3	1:E:1214:PHE:CZ	2.46	0.50
1:A:356:SER:HA	1:A:378:LEU:O	2.12	0.49
1:B:1156:GLU:HG3	1:B:1172:TYR:CE2	2.47	0.49
1:F:566:VAL:HG21	1:F:568:TRP:CE2	2.47	0.49
1:C:988:LEU:HD13	1:C:992:THR:O	2.13	0.49
1:B:1058:ASN:HB2	1:B:1105:GLU:H	1.77	0.49
1:C:566:VAL:HG21	1:C:568:TRP:CE2	2.47	0.49
1:F:703:THR:OG1	1:F:709:THR:HB	2.13	0.49
1:B:533:GLU:OE2	3:B:2302:GOL:O1	2.31	0.49
1:C:356:SER:HA	1:C:378:LEU:O	2.12	0.49
1:D:566:VAL:HG21	1:D:568:TRP:CE2	2.47	0.49
1:E:356:SER:HA	1:E:378:LEU:O	2.12	0.49
1:C:901:THR:HG21	1:C:938:ALA:HB2	1.94	0.49
1:B:925:VAL:HG13	1:B:947:VAL:HG23	1.93	0.49
1:A:703:THR:OG1	1:A:709:THR:HB	2.13	0.48
1:D:1013:ALA:HA	1:D:1037:VAL:HG23	1.93	0.48
1:E:441:MET:HG2	1:E:478:PRO:HG2	1.96	0.48
1:A:901:THR:HG21	1:A:938:ALA:HB2	1.96	0.48
1:A:1117:GLY:HA3	1:A:1210:ALA:HB2	1.96	0.48
1:E:1156:GLU:HG3	1:E:1172:TYR:CE2	2.48	0.48
1:C:1014:GLY:N	1:C:1037:VAL:HG23	2.28	0.48
1:D:1266:ALA:O	1:D:1267:HIS:CB	2.61	0.48
1:D:703:THR:OG1	1:D:709:THR:HB	2.13	0.48
1:E:566:VAL:HG21	1:E:568:TRP:CE2	2.48	0.48
1:C:441:MET:HG2	1:C:478:PRO:HG2	1.95	0.48
1:E:360:THR:HA	1:E:361:HIS:HA	1.72	0.48
1:E:703:THR:OG1	1:E:709:THR:HB	2.13	0.48
1:D:1113:GLU:HB2	1:D:1180:THR:HG22	1.94	0.48
1:E:360:THR:HB	1:E:361:HIS:CE1	2.49	0.48
1:C:988:LEU:CD1	1:C:994:THR:HG23	2.44	0.48
1:C:1223:SER:OG	1:C:1254:GLU:O	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:988:LEU:CD1	1:D:994:THR:HG23	2.44	0.48
1:B:441:MET:HG2	1:B:478:PRO:HG2	1.95	0.48
1:E:1025:PHE:O	1:E:1025:PHE:HD1	1.97	0.47
1:C:1023:THR:HG22	1:C:1028:GLU:CG	2.36	0.47
1:D:18:GLU:OE2	1:D:40:LYS:NZ	2.40	0.47
1:D:901:THR:HG21	1:D:938:ALA:HB2	1.96	0.47
1:E:827:SER:N	1:E:828:PRO:CD	2.78	0.47
1:A:827:SER:N	1:A:828:PRO:CD	2.78	0.47
1:B:827:SER:N	1:B:828:PRO:CD	2.77	0.47
1:B:1117:GLY:HA3	1:B:1210:ALA:HB2	1.97	0.47
1:D:827:SER:N	1:D:828:PRO:CD	2.77	0.47
1:A:1058:ASN:HB2	1:A:1105:GLU:H	1.79	0.47
1:C:49:ALA:HB1	1:C:93:ARG:HD2	1.97	0.47
1:B:703:THR:OG1	1:B:709:THR:HB	2.14	0.47
1:D:471:LYS:HE3	1:D:503:ASN:HB3	1.97	0.47
1:C:925:VAL:HG13	1:C:947:VAL:HG23	1.97	0.47
1:C:943:VAL:HB	1:C:954:VAL:CG2	2.45	0.47
1:D:1014:GLY:N	1:D:1037:VAL:HG23	2.30	0.47
1:E:715:GLY:O	1:E:718:LYS:HB3	2.14	0.47
1:F:49:ALA:HB1	1:F:93:ARG:HD2	1.95	0.47
1:A:49:ALA:HB1	1:A:93:ARG:HD2	1.95	0.47
1:B:64:LEU:HD13	1:B:172:ILE:HG21	1.97	0.47
1:C:827:SER:N	1:C:828:PRO:CD	2.78	0.47
1:D:441:MET:HG2	1:D:478:PRO:HG2	1.97	0.47
1:B:988:LEU:CD1	1:B:994:THR:HG23	2.45	0.47
1:A:64:LEU:HD13	1:A:172:ILE:HG21	1.98	0.46
1:E:1113:GLU:HB2	1:E:1180:THR:HG22	1.97	0.46
1:D:1113:GLU:CB	1:D:1180:THR:HG22	2.46	0.46
1:F:827:SER:N	1:F:828:PRO:CD	2.78	0.46
1:C:1023:THR:CG2	1:C:1028:GLU:CG	2.91	0.46
1:D:1058:ASN:HB2	1:D:1105:GLU:H	1.80	0.46
1:A:74:TYR:CE1	1:A:618:LYS:HG3	2.50	0.46
1:B:951:LYS:HD2	1:B:952:ILE:O	2.16	0.46
1:A:931:SER:HB3	1:A:934:GLN:CG	2.46	0.46
1:A:988:LEU:CD1	1:A:988:LEU:N	2.79	0.46
1:D:210:LEU:HD12	1:D:210:LEU:N	2.30	0.46
1:D:966:LEU:CD1	1:D:1262:THR:HG21	2.44	0.46
1:F:64:LEU:HD13	1:F:172:ILE:HG21	1.97	0.46
1:F:1113:GLU:HB2	1:F:1180:THR:HG22	1.98	0.46
1:B:1014:GLY:N	1:B:1037:VAL:HG23	2.31	0.46
1:F:1058:ASN:HB2	1:F:1105:GLU:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:988:LEU:CD1	1:C:988:LEU:N	2.78	0.46
1:D:74:TYR:CE1	1:D:618:LYS:HG3	2.51	0.46
1:F:165:ARG:HH22	3:F:2302:GOL:H11	1.80	0.46
1:C:1014:GLY:H	1:C:1037:VAL:HG23	1.81	0.46
1:F:901:THR:HG21	1:F:938:ALA:HB2	1.97	0.45
1:D:358:ARG:HG2	1:D:360:THR:HG23	1.97	0.45
1:D:988:LEU:N	1:D:988:LEU:CD1	2.79	0.45
1:E:64:LEU:HD13	1:E:172:ILE:HG21	1.98	0.45
1:A:441:MET:HG2	1:A:478:PRO:HG2	1.98	0.45
1:B:208:MET:SD	1:B:230:VAL:HG21	2.55	0.45
1:D:64:LEU:HD13	1:D:172:ILE:HG21	1.98	0.45
1:E:360:THR:HB	1:E:361:HIS:ND1	2.32	0.45
1:E:1254:GLU:HA	1:E:1261:VAL:HG21	1.98	0.45
1:A:210:LEU:N	1:A:210:LEU:HD12	2.32	0.45
1:A:1113:GLU:HB2	1:A:1180:THR:HG22	1.99	0.45
1:E:901:THR:HG21	1:E:938:ALA:HB2	1.99	0.45
1:A:988:LEU:CD1	1:A:994:THR:CG2	2.91	0.45
1:A:1254:GLU:HA	1:A:1261:VAL:HG21	1.97	0.45
1:C:210:LEU:N	1:C:210:LEU:HD12	2.32	0.45
1:A:818:LYS:HE2	1:A:818:LYS:HB3	1.81	0.45
1:B:582:ARG:HB3	1:B:584:PHE:CE1	2.52	0.45
1:B:973:PRO:HG2	1:B:976:THR:HB	1.98	0.45
1:D:1117:GLY:HA3	1:D:1210:ALA:HB2	1.98	0.45
1:F:74:TYR:CE1	1:F:618:LYS:HG3	2.52	0.45
1:A:228:GLN:HA	1:A:282:ARG:O	2.17	0.45
1:B:665:GLY:O	1:B:666:ASN:HB2	2.16	0.45
1:F:854:GLU:OE2	1:F:916:SER:HA	2.16	0.45
1:F:1113:GLU:CB	1:F:1180:THR:HG22	2.47	0.45
1:B:965:LEU:HD21	1:B:1024:VAL:HG21	1.99	0.45
1:C:228:GLN:HA	1:C:282:ARG:O	2.16	0.45
1:D:459:PHE:N	1:D:460:PRO:HD2	2.32	0.45
1:E:791:GLU:OE2	1:E:844:LYS:HE2	2.17	0.45
1:E:1113:GLU:CB	1:E:1180:THR:HG22	2.47	0.45
1:F:591:TRP:CH2	3:F:2302:GOL:C2	2.99	0.45
1:C:988:LEU:N	1:C:988:LEU:HD12	2.31	0.45
1:D:392:ASN:OD1	1:D:1112:THR:HG21	2.17	0.45
1:D:988:LEU:CD1	1:D:988:LEU:H	2.30	0.45
1:C:392:ASN:OD1	1:C:1112:THR:HG21	2.17	0.44
1:D:228:GLN:HA	1:D:282:ARG:O	2.17	0.44
1:E:98:ILE:HG23	1:E:102:LEU:HD12	1.99	0.44
1:F:105:LYS:HA	1:F:105:LYS:HD3	1.90	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:302:ARG:HG2	1:A:303:TRP:N	2.33	0.44
1:B:1175:ALA:O	1:B:1177:VAL:HG23	2.17	0.44
1:F:228:GLN:HA	1:F:282:ARG:O	2.17	0.44
1:C:74:TYR:CE1	1:C:618:LYS:HG3	2.52	0.44
1:D:1254:GLU:HA	1:D:1261:VAL:HG21	1.99	0.44
1:B:228:GLN:HA	1:B:282:ARG:O	2.17	0.44
1:C:966:LEU:HD12	1:C:1262:THR:HG21	1.99	0.44
1:D:100:ARG:HG2	1:D:148:GLY:HA3	2.00	0.44
1:D:988:LEU:HD11	1:D:994:THR:HG23	1.99	0.44
1:F:361:HIS:NE2	3:F:2302:GOL:O2	2.50	0.44
1:F:674:THR:HG21	1:F:679:VAL:HG21	1.99	0.44
1:A:1113:GLU:CB	1:A:1180:THR:HG22	2.47	0.44
1:D:893:TYR:OH	1:D:952:ILE:HG23	2.18	0.44
1:F:441:MET:HG2	1:F:478:PRO:HG2	1.99	0.44
1:F:893:TYR:OH	1:F:952:ILE:HG23	2.17	0.44
1:C:471:LYS:HE3	1:C:503:ASN:HB3	2.00	0.44
1:E:74:TYR:CE1	1:E:618:LYS:HG3	2.53	0.44
1:F:855:ALA:HB2	1:F:878:ALA:HB2	1.99	0.44
1:A:387:TRP:CE2	1:A:448:MET:HG2	2.52	0.44
1:A:1131:ARG:HD2	1:B:747:ASN:ND2	2.33	0.44
1:B:74:TYR:CE1	1:B:618:LYS:HG3	2.52	0.44
1:B:808:ARG:HA	1:B:839:LYS:HA	2.00	0.44
1:C:591:TRP:HA	1:C:592:THR:HA	1.78	0.44
1:C:1117:GLY:HA3	1:C:1210:ALA:HB2	1.99	0.44
1:E:582:ARG:HB3	1:E:584:PHE:CE1	2.53	0.44
1:E:228:GLN:HA	1:E:282:ARG:O	2.18	0.44
1:B:521:ARG:CG	1:B:521:ARG:NH1	2.81	0.44
1:A:808:ARG:HA	1:A:839:LYS:HA	2.00	0.43
1:B:1113:GLU:CB	1:B:1180:THR:HG22	2.48	0.43
1:D:360:THR:HA	1:D:361:HIS:HA	1.77	0.43
1:B:358:ARG:HG2	1:B:360:THR:HG23	2.00	0.43
1:C:1113:GLU:CB	1:C:1180:THR:HG22	2.48	0.43
1:F:459:PHE:N	1:F:460:PRO:HD2	2.33	0.43
1:B:165:ARG:HH22	3:B:2302:GOL:H12	1.82	0.43
1:B:210:LEU:HD12	1:B:210:LEU:N	2.33	0.43
1:B:350:GLN:HE22	1:B:375:LYS:HB3	1.83	0.43
1:D:973:PRO:HB3	1:D:1214:PHE:CZ	2.53	0.43
1:E:459:PHE:N	1:E:460:PRO:HD2	2.33	0.43
1:E:1222:LEU:HD22	1:E:1253:ALA:HB1	2.01	0.43
1:A:988:LEU:HD22	1:A:992:THR:HB	2.00	0.43
1:B:382:GLU:HA	1:B:443:SER:HB3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:959:ILE:HG21	1:C:962:ILE:HD13	1.98	0.43
1:A:387:TRP:CZ2	1:A:448:MET:HG2	2.53	0.43
1:C:358:ARG:HG2	1:C:360:THR:HG23	2.00	0.43
1:C:360:THR:HA	1:C:361:HIS:HA	1.77	0.43
1:D:805:ALA:HB3	1:D:843:GLY:HA2	2.00	0.43
1:B:901:THR:HG21	1:B:938:ALA:HB2	2.00	0.43
1:C:98:ILE:HG23	1:C:102:LEU:HD12	2.00	0.43
1:D:582:ARG:HB3	1:D:584:PHE:CE1	2.54	0.43
1:D:713:TYR:OH	1:D:717:ASP:OD1	2.21	0.43
1:D:973:PRO:HG2	1:D:976:THR:HB	2.00	0.43
1:E:382:GLU:HA	1:E:443:SER:HB3	2.01	0.43
1:F:360:THR:HA	1:F:361:HIS:HA	1.79	0.43
1:A:471:LYS:HE3	1:A:503:ASN:HB3	2.00	0.43
1:A:805:ALA:HB3	1:A:843:GLY:HA2	2.01	0.43
1:B:98:ILE:HG23	1:B:102:LEU:HD12	2.01	0.43
1:D:382:GLU:HA	1:D:443:SER:HB3	2.01	0.43
1:F:591:TRP:CZ2	3:F:2302:GOL:C3	3.00	0.43
1:E:808:ARG:HA	1:E:839:LYS:HA	1.99	0.43
1:F:654:ALA:HB1	1:F:803:PRO:HG3	2.00	0.43
1:F:879:VAL:HG12	1:F:881:GLY:H	1.84	0.43
1:B:893:TYR:OH	1:B:952:ILE:HG23	2.18	0.43
1:E:471:LYS:HE3	1:E:503:ASN:HB3	2.01	0.43
1:F:361:HIS:CD2	3:F:2302:GOL:HO2	2.36	0.43
1:F:387:TRP:CZ2	1:F:448:MET:HG2	2.54	0.43
1:A:358:ARG:HG2	1:A:360:THR:HG23	2.00	0.42
1:B:302:ARG:HG2	1:B:303:TRP:N	2.34	0.42
1:C:64:LEU:HD13	1:C:172:ILE:HG21	2.00	0.42
1:E:1175:ALA:O	1:E:1177:VAL:HG23	2.18	0.42
1:F:382:GLU:HA	1:F:443:SER:HB3	2.01	0.42
1:B:459:PHE:N	1:B:460:PRO:HD2	2.34	0.42
1:C:459:PHE:N	1:C:460:PRO:HD2	2.35	0.42
1:D:302:ARG:HG2	1:D:303:TRP:N	2.33	0.42
1:F:791:GLU:OE2	1:F:844:LYS:HE2	2.18	0.42
1:A:1116:LEU:HD11	1:A:1182:VAL:HG21	2.02	0.42
1:C:105:LYS:HA	1:C:105:LYS:HD3	1.90	0.42
1:C:582:ARG:HB3	1:C:584:PHE:CE1	2.55	0.42
1:F:210:LEU:N	1:F:210:LEU:HD12	2.34	0.42
1:A:893:TYR:OH	1:A:952:ILE:HG23	2.19	0.42
1:D:387:TRP:CE2	1:D:448:MET:HG2	2.54	0.42
1:E:25:VAL:HG12	1:E:102:LEU:HD11	2.02	0.42
1:F:8:ASP:HB3	1:F:11:THR:HG1	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:98:ILE:HG23	1:F:102:LEU:HD12	2.00	0.42
1:F:770:LYS:HD3	1:F:868:GLN:OE1	2.20	0.42
1:A:770:LYS:HD3	1:A:868:GLN:OE1	2.20	0.42
1:A:973:PRO:HG2	1:A:976:THR:HB	2.02	0.42
1:A:988:LEU:HD13	1:A:992:THR:O	2.20	0.42
1:B:897:TYR:O	1:B:956:VAL:HA	2.20	0.42
1:D:808:ARG:HA	1:D:839:LYS:HA	2.00	0.42
1:E:1058:ASN:HB2	1:E:1105:GLU:H	1.85	0.42
1:A:459:PHE:N	1:A:460:PRO:HD2	2.34	0.42
1:A:582:ARG:HB3	1:A:584:PHE:CE1	2.55	0.42
1:C:1113:GLU:HB2	1:C:1180:THR:HG22	2.01	0.42
1:D:387:TRP:CZ2	1:D:448:MET:HG2	2.54	0.42
1:D:674:THR:HG21	1:D:679:VAL:HG21	2.01	0.42
1:E:770:LYS:HD3	1:E:868:GLN:OE1	2.20	0.42
1:E:805:ALA:HB3	1:E:843:GLY:HA2	2.01	0.42
1:F:808:ARG:HA	1:F:839:LYS:HA	2.02	0.42
1:D:68:TYR:CZ	1:D:170:SER:HB3	2.54	0.42
1:E:68:TYR:CZ	1:E:170:SER:HB3	2.55	0.42
1:E:652:LEU:HB2	1:E:653:PRO:HA	2.01	0.42
1:A:382:GLU:HA	1:A:443:SER:HB3	2.01	0.42
1:B:387:TRP:CZ2	1:B:448:MET:HG2	2.54	0.42
1:B:659:VAL:HG11	1:B:803:PRO:HB2	2.00	0.42
1:B:1132:PHE:HB2	1:C:747:ASN:OD1	2.19	0.42
1:E:358:ARG:HG2	1:E:360:THR:HG23	1.98	0.42
1:E:801:ILE:H	1:E:801:ILE:HG12	1.63	0.42
1:E:974:VAL:HG22	1:E:1037:VAL:HG12	2.02	0.42
1:F:659:VAL:HG11	1:F:803:PRO:HB2	2.01	0.42
1:F:1254:GLU:HA	1:F:1261:VAL:HG21	2.02	0.42
1:A:98:ILE:HG23	1:A:102:LEU:HD12	2.00	0.42
1:A:208:MET:SD	1:A:230:VAL:HG21	2.60	0.42
1:B:988:LEU:CD1	1:B:994:THR:CG2	2.97	0.42
1:A:591:TRP:HA	1:A:592:THR:HA	1.78	0.41
1:C:208:MET:SD	1:C:230:VAL:HG21	2.60	0.41
1:C:500:LEU:HD23	1:C:500:LEU:HA	1.94	0.41
1:C:988:LEU:CD1	1:C:994:THR:CG2	2.98	0.41
1:B:25:VAL:HG12	1:B:102:LEU:HD11	2.02	0.41
1:B:471:LYS:HE3	1:B:503:ASN:HB3	2.02	0.41
1:B:1113:GLU:HB2	1:B:1180:THR:HG22	2.01	0.41
1:C:68:TYR:CZ	1:C:170:SER:HB3	2.55	0.41
1:C:521:ARG:CG	1:C:521:ARG:NH1	2.80	0.41
1:C:791:GLU:OE2	1:C:844:LYS:HE2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:208:MET:SD	1:E:230:VAL:HG21	2.60	0.41
1:E:717:ASP:OD1	1:E:717:ASP:N	2.48	0.41
1:A:392:ASN:OD1	1:A:1112:THR:HG21	2.21	0.41
1:B:387:TRP:CE2	1:B:448:MET:HG2	2.56	0.41
1:C:1128:ASN:O	1:C:1193:THR:HB	2.20	0.41
1:F:358:ARG:HG2	1:F:360:THR:HG23	2.01	0.41
1:D:521:ARG:CG	1:D:521:ARG:NH1	2.82	0.41
1:F:652:LEU:HB2	1:F:653:PRO:HA	2.02	0.41
1:A:68:TYR:CZ	1:A:170:SER:HB3	2.55	0.41
1:C:988:LEU:CD1	1:C:988:LEU:H	2.34	0.41
1:D:25:VAL:HG12	1:D:102:LEU:HD11	2.02	0.41
1:D:988:LEU:HD12	1:D:988:LEU:H	1.84	0.41
1:C:652:LEU:HB2	1:C:653:PRO:HA	2.02	0.41
1:C:1116:LEU:HD11	1:C:1182:VAL:HG21	2.01	0.41
1:E:1040:SER:HB3	1:E:1212:SER:HB3	2.02	0.41
1:F:208:MET:SD	1:F:230:VAL:HG21	2.61	0.41
1:A:973:PRO:HB3	1:A:1214:PHE:CZ	2.56	0.41
1:B:717:ASP:OD1	1:B:717:ASP:N	2.48	0.41
1:B:805:ALA:HB3	1:B:843:GLY:HA2	2.01	0.41
1:B:1254:GLU:HA	1:B:1261:VAL:HG21	2.03	0.41
1:C:808:ARG:HA	1:C:839:LYS:HA	2.01	0.41
1:B:68:TYR:CZ	1:B:170:SER:HB3	2.56	0.41
1:B:447:GLU:OE1	3:B:2302:GOL:O1	2.25	0.41
1:D:98:ILE:HG23	1:D:102:LEU:HD12	2.03	0.41
1:D:1014:GLY:H	1:D:1037:VAL:HG23	1.83	0.41
1:E:716:ALA:C	1:E:718:LYS:H	2.23	0.41
1:F:68:TYR:CZ	1:F:170:SER:HB3	2.56	0.41
1:A:652:LEU:HB2	1:A:653:PRO:HA	2.03	0.41
1:B:1128:ASN:O	1:B:1193:THR:HB	2.21	0.41
1:C:382:GLU:HA	1:C:443:SER:HB3	2.02	0.41
1:E:210:LEU:N	1:E:210:LEU:HD12	2.35	0.41
1:F:1117:GLY:HA3	1:F:1210:ALA:HB2	2.02	0.41
1:F:1128:ASN:O	1:F:1193:THR:HB	2.21	0.41
1:A:360:THR:HA	1:A:361:HIS:HA	1.76	0.41
1:C:654:ALA:HB1	1:C:803:PRO:HG3	2.03	0.41
1:F:471:LYS:HE3	1:F:503:ASN:HB3	2.03	0.41
1:F:582:ARG:HB3	1:F:584:PHE:CE1	2.55	0.41
1:C:674:THR:HG21	1:C:679:VAL:HG21	2.02	0.40
1:D:1128:ASN:O	1:D:1193:THR:HB	2.21	0.40
1:A:972:THR:HG22	1:A:1035:ILE:CD1	2.51	0.40
1:C:387:TRP:CZ2	1:C:448:MET:HG2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:547:THR:HG22	1:B:561:TYR:CE1	2.57	0.40
1:D:1119:ILE:HD12	1:D:1140:ILE:HD13	2.04	0.40
1:A:1128:ASN:O	1:A:1193:THR:HB	2.21	0.40
1:B:674:THR:HG21	1:B:679:VAL:HG21	2.03	0.40
1:C:893:TYR:OH	1:C:952:ILE:HG23	2.21	0.40
1:F:113:GLY:HA3	1:F:174:ARG:HD2	2.03	0.40
1:F:591:TRP:HA	1:F:592:THR:HA	1.80	0.40
1:A:1002:TRP:CH2	1:A:1033:ALA:HB2	2.57	0.40
1:A:1123:PHE:CZ	1:A:1138:THR:HG21	2.56	0.40
1:B:881:GLY:HA3	1:B:889:ARG:HH21	1.87	0.40
1:C:18:GLU:OE1	1:C:895:ARG:HG2	2.22	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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	1233/1304 (95%)	1180 (96%)	52 (4%)	1 (0%)	51 82
1	B	1229/1304 (94%)	1180 (96%)	47 (4%)	2 (0%)	47 78
1	C	1237/1304 (95%)	1186 (96%)	50 (4%)	1 (0%)	51 82
1	D	1249/1304 (96%)	1193 (96%)	53 (4%)	3 (0%)	47 78
1	E	1229/1304 (94%)	1179 (96%)	46 (4%)	4 (0%)	41 71
1	F	1238/1304 (95%)	1186 (96%)	49 (4%)	3 (0%)	47 78
All	All	7415/7824 (95%)	7104 (96%)	297 (4%)	14 (0%)	47 78

All (14) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	D	1267	HIS

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Mol	Chain	Res	Type
1	F	9	SER
1	B	663	GLY
1	D	1270	VAL
1	E	663	GLY
1	A	535	ALA
1	B	535	ALA
1	C	535	ALA
1	D	535	ALA
1	E	535	ALA
1	E	1081	ASN
1	F	535	ALA
1	E	664	SER
1	F	663	GLY

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	982/1056 (93%)	938 (96%)	44 (4%)	27	61
1	B	972/1056 (92%)	927 (95%)	45 (5%)	27	60
1	C	986/1056 (93%)	943 (96%)	43 (4%)	28	61
1	D	989/1056 (94%)	944 (95%)	45 (5%)	27	60
1	E	960/1056 (91%)	911 (95%)	49 (5%)	24	56
1	F	983/1056 (93%)	936 (95%)	47 (5%)	25	58
All	All	5872/6336 (93%)	5599 (95%)	273 (5%)	27	60

All (273) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	22	SER
1	A	33	SER
1	A	79	GLU
1	A	100	ARG
1	A	182	ASP

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Mol	Chain	Res	Type
1	A	185	HIS
1	A	200	THR
1	A	227	LYS
1	A	237	THR
1	A	250	SER
1	A	274	LYS
1	A	302	ARG
1	A	317	GLU
1	A	471	LYS
1	A	481	TYR
1	A	499	ASN
1	A	526	SER
1	A	536	SER
1	A	539	ASN
1	A	543	ILE
1	A	618	LYS
1	A	652	LEU
1	A	692	ARG
1	A	709	THR
1	A	748	ASN
1	A	756	THR
1	A	763	THR
1	A	772	LYS
1	A	801	ILE
1	A	807	ASN
1	A	870	SER
1	A	895	ARG
1	A	971	SER
1	A	1034	THR
1	A	1035	ILE
1	A	1043	THR
1	A	1078	VAL
1	A	1096	TYR
1	A	1138	THR
1	A	1164	SER
1	A	1180	THR
1	A	1216	THR
1	A	1219	SER
1	A	1282	THR
1	B	30	ASN
1	B	33	SER
1	B	42	MET

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Mol	Chain	Res	Type
1	B	185	HIS
1	B	200	THR
1	B	227	LYS
1	B	237	THR
1	B	260	THR
1	B	274	LYS
1	B	297	THR
1	B	302	ARG
1	B	317	GLU
1	B	374	GLU
1	B	404	GLN
1	B	481	TYR
1	B	499	ASN
1	B	521	ARG
1	B	526	SER
1	B	536	SER
1	B	539	ASN
1	B	543	ILE
1	B	618	LYS
1	B	652	LEU
1	B	662	LYS
1	B	692	ARG
1	B	709	THR
1	B	748	ASN
1	B	756	THR
1	B	801	ILE
1	B	807	ASN
1	B	870	SER
1	B	876	THR
1	B	951	LYS
1	B	960	ASP
1	B	1040	SER
1	B	1078	VAL
1	B	1096	TYR
1	B	1138	THR
1	B	1161	GLN
1	B	1164	SER
1	B	1180	THR
1	B	1216	THR
1	B	1219	SER
1	B	1262	THR
1	B	1282	THR

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Mol	Chain	Res	Type
1	C	8	ASP
1	C	33	SER
1	C	79	GLU
1	C	105	LYS
1	C	182	ASP
1	C	185	HIS
1	C	200	THR
1	C	227	LYS
1	C	237	THR
1	C	250	SER
1	C	260	THR
1	C	297	THR
1	C	302	ARG
1	C	317	GLU
1	C	481	TYR
1	C	499	ASN
1	C	521	ARG
1	C	526	SER
1	C	536	SER
1	C	539	ASN
1	C	543	ILE
1	C	618	LYS
1	C	652	LEU
1	C	692	ARG
1	C	709	THR
1	C	748	ASN
1	C	756	THR
1	C	767	LYS
1	C	772	LYS
1	C	801	ILE
1	C	807	ASN
1	C	870	SER
1	C	895	ARG
1	C	898	TYR
1	C	988	LEU
1	C	1043	THR
1	C	1078	VAL
1	C	1096	TYR
1	C	1138	THR
1	C	1164	SER
1	C	1180	THR
1	C	1216	THR

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Mol	Chain	Res	Type
1	C	1282	THR
1	D	7	SER
1	D	8	ASP
1	D	30	ASN
1	D	33	SER
1	D	42	MET
1	D	47	VAL
1	D	82	SER
1	D	185	HIS
1	D	227	LYS
1	D	237	THR
1	D	250	SER
1	D	274	LYS
1	D	302	ARG
1	D	317	GLU
1	D	471	LYS
1	D	481	TYR
1	D	521	ARG
1	D	526	SER
1	D	539	ASN
1	D	543	ILE
1	D	618	LYS
1	D	620	SER
1	D	634	THR
1	D	662	LYS
1	D	692	ARG
1	D	709	THR
1	D	748	ASN
1	D	756	THR
1	D	772	LYS
1	D	801	ILE
1	D	807	ASN
1	D	870	SER
1	D	971	SER
1	D	1027	LYS
1	D	1043	THR
1	D	1078	VAL
1	D	1096	TYR
1	D	1138	THR
1	D	1161	GLN
1	D	1164	SER
1	D	1180	THR

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Mol	Chain	Res	Type
1	D	1216	THR
1	D	1219	SER
1	D	1265	PRO
1	D	1282	THR
1	E	18	GLU
1	E	23	SER
1	E	30	ASN
1	E	33	SER
1	E	42	MET
1	E	100	ARG
1	E	105	LYS
1	E	185	HIS
1	E	200	THR
1	E	237	THR
1	E	250	SER
1	E	260	THR
1	E	274	LYS
1	E	297	THR
1	E	302	ARG
1	E	317	GLU
1	E	374	GLU
1	E	404	GLN
1	E	471	LYS
1	E	481	TYR
1	E	499	ASN
1	E	521	ARG
1	E	526	SER
1	E	536	SER
1	E	539	ASN
1	E	543	ILE
1	E	618	LYS
1	E	652	LEU
1	E	662	LYS
1	E	692	ARG
1	E	709	THR
1	E	717	ASP
1	E	748	ASN
1	E	756	THR
1	E	801	ILE
1	E	807	ASN
1	E	870	SER
1	E	955	ARG

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Mol	Chain	Res	Type
1	E	1034	THR
1	E	1035	ILE
1	E	1078	VAL
1	E	1096	TYR
1	E	1138	THR
1	E	1164	SER
1	E	1180	THR
1	E	1216	THR
1	E	1219	SER
1	E	1280	HIS
1	E	1282	THR
1	F	7	SER
1	F	8	ASP
1	F	33	SER
1	F	61	GLN
1	F	79	GLU
1	F	100	ARG
1	F	105	LYS
1	F	185	HIS
1	F	227	LYS
1	F	237	THR
1	F	250	SER
1	F	274	LYS
1	F	297	THR
1	F	302	ARG
1	F	317	GLU
1	F	481	TYR
1	F	499	ASN
1	F	526	SER
1	F	536	SER
1	F	539	ASN
1	F	543	ILE
1	F	618	LYS
1	F	652	LEU
1	F	662	LYS
1	F	692	ARG
1	F	709	THR
1	F	748	ASN
1	F	756	THR
1	F	772	LYS
1	F	801	ILE
1	F	807	ASN

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Mol	Chain	Res	Type
1	F	870	SER
1	F	955	ARG
1	F	960	ASP
1	F	971	SER
1	F	988	LEU
1	F	1034	THR
1	F	1035	ILE
1	F	1072	LYS
1	F	1078	VAL
1	F	1096	TYR
1	F	1138	THR
1	F	1164	SER
1	F	1180	THR
1	F	1216	THR
1	F	1219	SER
1	F	1282	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (4) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	896	ASN
1	C	896	ASN
1	E	327	HIS
1	E	711	GLN

5.3.3 RNA (i)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 18 ligands modelled in this entry, 6 are monoatomic - leaving 12 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
3	GOL	F	2302	-	5,5,5	0.08	0	5,5,5	0.43	0
3	GOL	A	2303	-	5,5,5	0.20	0	5,5,5	0.61	0
3	GOL	B	2302	-	5,5,5	0.17	0	5,5,5	0.53	0
2	SO4	C	2301	-	4,4,4	0.35	0	6,6,6	0.13	0
3	GOL	E	2302	-	5,5,5	0.23	0	5,5,5	0.38	0
3	GOL	D	2303	-	5,5,5	0.16	0	5,5,5	0.60	0
2	SO4	A	2301	-	4,4,4	0.17	0	6,6,6	0.31	0
3	GOL	C	2302	-	5,5,5	0.16	0	5,5,5	0.46	0
3	GOL	D	2302	-	5,5,5	0.15	0	5,5,5	0.48	0
2	SO4	F	2301	-	4,4,4	0.32	0	6,6,6	0.07	0
2	SO4	D	2301	-	4,4,4	0.33	0	6,6,6	0.23	0
3	GOL	A	2302	-	5,5,5	0.18	0	5,5,5	0.59	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	GOL	F	2302	-	-	0/4/4/4	-
3	GOL	A	2303	-	-	2/4/4/4	-
3	GOL	B	2302	-	-	0/4/4/4	-
3	GOL	E	2302	-	-	2/4/4/4	-
3	GOL	D	2303	-	-	0/4/4/4	-
3	GOL	C	2302	-	-	2/4/4/4	-
3	GOL	D	2302	-	-	0/4/4/4	-
3	GOL	A	2302	-	-	4/4/4/4	-

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

All (10) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	2302	GOL	C1-C2-C3-O3
3	A	2303	GOL	C1-C2-C3-O3
3	A	2303	GOL	O2-C2-C3-O3
3	A	2302	GOL	O1-C1-C2-C3
3	C	2302	GOL	O1-C1-C2-C3
3	A	2302	GOL	O1-C1-C2-O2
3	A	2302	GOL	O2-C2-C3-O3
3	C	2302	GOL	O1-C1-C2-O2
3	E	2302	GOL	C1-C2-C3-O3
3	E	2302	GOL	O2-C2-C3-O3

There are no ring outliers.

3 monomers are involved in 15 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	F	2302	GOL	9	0
3	B	2302	GOL	5	0
3	E	2302	GOL	1	0

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 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	1239/1304 (95%)	0.67	73 (5%) 22 18	55, 88, 167, 221	0
1	B	1235/1304 (94%)	0.80	96 (7%) 13 10	48, 84, 169, 243	0
1	C	1243/1304 (95%)	0.79	117 (9%) 8 6	59, 96, 188, 248	0
1	D	1253/1304 (96%)	0.68	98 (7%) 13 10	57, 98, 155, 227	0
1	E	1235/1304 (94%)	1.31	257 (20%) 1 0	59, 106, 248, 332	0
1	F	1244/1304 (95%)	1.43	356 (28%) 0 0	80, 148, 219, 297	0
All	All	7449/7824 (95%)	0.95	997 (13%) 3 2	48, 102, 203, 332	0

All (997) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	E	1191	THR	12.6
1	F	1029	PHE	12.3
1	F	998	PHE	12.2
1	F	1024	VAL	12.0
1	E	1094	TRP	11.9
1	E	980	LEU	11.6
1	F	962	ILE	11.4
1	E	898	TYR	11.0
1	F	898	TYR	10.6
1	E	905	PRO	10.5
1	F	14	SER	10.4
1	E	904	LYS	10.1
1	E	1207	LEU	9.9
1	F	965	LEU	9.9
1	E	1121	MET	9.7
1	E	1168	LYS	9.6
1	E	1142	ILE	9.4
1	E	963	GLY	9.3
1	E	1083	GLY	9.3

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Mol	Chain	Res	Type	RSRZ
1	E	1088	PRO	9.1
1	F	1002	TRP	9.1
1	E	962	ILE	9.0
1	E	1124	PHE	9.0
1	F	1025	PHE	9.0
1	F	891	PHE	8.8
1	F	1000	VAL	8.6
1	E	1158	ILE	8.5
1	F	892	TYR	8.4
1	B	962	ILE	8.4
1	F	963	GLY	8.3
1	F	739	ILE	8.2
1	F	283	THR	8.1
1	B	958	MET	8.1
1	B	1031	VAL	8.0
1	F	654	ALA	8.0
1	C	965	LEU	8.0
1	C	962	ILE	8.0
1	F	651	ILE	7.8
1	E	960	ASP	7.8
1	E	1071	ILE	7.7
1	E	1186	VAL	7.7
1	E	1078	VAL	7.6
1	E	1091	TRP	7.6
1	E	1016	VAL	7.6
1	E	1205	ILE	7.5
1	C	966	LEU	7.4
1	E	1106	ILE	7.3
1	B	954	VAL	7.3
1	C	929	ALA	7.2
1	E	999	ALA	7.2
1	E	1112	THR	7.2
1	E	998	PHE	7.2
1	F	966	LEU	7.2
1	F	679	VAL	7.1
1	E	901	THR	7.1
1	E	934	GLN	7.1
1	E	891	PHE	7.0
1	E	987	VAL	7.0
1	E	1060	PRO	6.9
1	F	1023	THR	6.9
1	E	927	TRP	6.9

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Mol	Chain	Res	Type	RSRZ
1	E	1202	LEU	6.9
1	E	1187	THR	6.8
1	E	1261	VAL	6.8
1	E	1123	PHE	6.8
1	F	1022	ALA	6.7
1	E	1129	ALA	6.6
1	E	1195	SER	6.6
1	F	12	GLN	6.5
1	E	1107	THR	6.5
1	E	996	ALA	6.4
1	E	1108	PHE	6.4
1	E	1034	THR	6.4
1	B	1030	LYS	6.3
1	F	1035	ILE	6.3
1	F	20	VAL	6.1
1	E	1099	ALA	6.1
1	E	1059	ILE	6.0
1	E	981	PRO	6.0
1	B	965	LEU	6.0
1	F	149	GLY	6.0
1	E	903	ASN	6.0
1	F	943	VAL	6.0
1	F	911	VAL	6.0
1	E	807	ASN	6.0
1	F	1018	VAL	5.9
1	E	1031	VAL	5.9
1	E	939	GLY	5.9
1	E	911	VAL	5.9
1	F	736	GLU	5.8
1	E	1035	ILE	5.8
1	F	935	ILE	5.8
1	C	941	PHE	5.8
1	F	111	PHE	5.8
1	F	141	LEU	5.7
1	C	891	PHE	5.7
1	E	912	GLU	5.7
1	E	941	PHE	5.7
1	F	681	LEU	5.7
1	F	906	ILE	5.6
1	E	1113	GLU	5.6
1	F	134	TYR	5.6
1	B	899	VAL	5.6

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Mol	Chain	Res	Type	RSRZ
1	F	863	LYS	5.6
1	B	956	VAL	5.5
1	F	696	GLU	5.5
1	F	1028	GLU	5.5
1	E	1150	THR	5.5
1	B	963	GLY	5.5
1	E	1120	VAL	5.5
1	B	952	ILE	5.5
1	E	902	GLY	5.5
1	F	232	PRO	5.5
1	F	730	TRP	5.4
1	F	811	PHE	5.4
1	E	1086	ALA	5.4
1	F	638	TYR	5.4
1	E	1081	ASN	5.3
1	F	897	TYR	5.3
1	C	1024	VAL	5.3
1	E	935	ILE	5.3
1	F	145	ALA	5.3
1	E	1098	LYS	5.3
1	E	1171	THR	5.3
1	C	1261	VAL	5.3
1	E	964	ALA	5.3
1	F	357	ILE	5.3
1	E	951	LYS	5.3
1	E	1208	LYS	5.3
1	F	927	TRP	5.2
1	F	251	ILE	5.2
1	D	771	LEU	5.2
1	F	321	LEU	5.2
1	F	1037	VAL	5.2
1	F	107	ILE	5.2
1	E	1055	LEU	5.2
1	A	998	PHE	5.2
1	E	1134	ASP	5.1
1	F	902	GLY	5.1
1	F	964	ALA	5.1
1	C	930	VAL	5.1
1	F	846	LEU	5.0
1	F	659	VAL	5.0
1	E	1095	ALA	5.0
1	F	938	ALA	5.0

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Mol	Chain	Res	Type	RSRZ
1	E	906	ILE	5.0
1	E	1109	GLU	5.0
1	C	927	TRP	5.0
1	E	1221	ALA	5.0
1	E	1111	ALA	5.0
1	E	907	LEU	5.0
1	C	943	VAL	4.9
1	F	241	ILE	4.9
1	E	1085	GLY	4.9
1	E	1089	SER	4.9
1	F	624	ILE	4.9
1	B	1182	VAL	4.9
1	E	947	VAL	4.9
1	C	1010	TYR	4.8
1	B	953	SER	4.8
1	C	998	PHE	4.8
1	F	995	SER	4.8
1	E	925	VAL	4.8
1	C	1253	ALA	4.8
1	E	1206	GLU	4.8
1	E	1182	VAL	4.8
1	E	1011	ASN	4.8
1	F	1106	ILE	4.7
1	F	945	GLY	4.7
1	F	845	VAL	4.7
1	E	979	VAL	4.7
1	F	649	LEU	4.7
1	F	109	ILE	4.7
1	F	934	GLN	4.7
1	E	1024	VAL	4.7
1	C	1222	LEU	4.7
1	E	1185	THR	4.7
1	E	1104	ALA	4.7
1	B	935	ILE	4.7
1	F	933	ASP	4.6
1	F	958	MET	4.6
1	E	1116	LEU	4.6
1	A	962	ILE	4.6
1	B	1274	ILE	4.6
1	F	762	VAL	4.6
1	A	1031	VAL	4.6
1	F	732	VAL	4.6

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Mol	Chain	Res	Type	RSRZ
1	E	938	ALA	4.6
1	E	918	GLY	4.6
1	F	974	VAL	4.6
1	F	959	ILE	4.5
1	F	19	VAL	4.5
1	F	127	LEU	4.5
1	F	792	VAL	4.5
1	E	1103	THR	4.5
1	E	1184	VAL	4.5
1	E	1169	PRO	4.4
1	E	1128	ASN	4.4
1	B	897	TYR	4.4
1	F	955	ARG	4.4
1	E	1049	SER	4.4
1	B	903	ASN	4.4
1	F	1016	VAL	4.3
1	F	603	TRP	4.3
1	F	1039	ARG	4.3
1	F	999	ALA	4.3
1	E	1105	GLU	4.3
1	E	1140	ILE	4.3
1	E	23	SER	4.3
1	F	13	MET	4.3
1	F	655	TRP	4.3
1	C	122	PHE	4.3
1	E	1222	LEU	4.3
1	D	962	ILE	4.3
1	C	915	TYR	4.2
1	E	1188	ASN	4.2
1	B	998	PHE	4.2
1	E	950	GLN	4.2
1	F	235	GLY	4.2
1	F	737	GLY	4.2
1	E	952	ILE	4.1
1	C	945	GLY	4.1
1	F	1116	LEU	4.1
1	F	120	VAL	4.1
1	E	1149	TRP	4.1
1	E	1192	THR	4.1
1	F	678	LYS	4.1
1	F	817	GLY	4.1
1	E	1029	PHE	4.1

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Mol	Chain	Res	Type	RSRZ
1	E	1026	GLY	4.0
1	F	226	LEU	4.0
1	F	819	LEU	4.0
1	E	1000	VAL	4.0
1	E	988	LEU	4.0
1	E	794	VAL	4.0
1	C	739	ILE	4.0
1	C	811	PHE	4.0
1	E	1084	GLY	4.0
1	C	985	PRO	4.0
1	F	561	TYR	4.0
1	F	1094	TRP	4.0
1	A	965	LEU	4.0
1	F	978	ALA	4.0
1	E	1079	ASP	4.0
1	E	978	ALA	4.0
1	F	219	LYS	3.9
1	E	899	VAL	3.9
1	E	22	SER	3.9
1	C	959	ILE	3.9
1	B	1020	GLY	3.9
1	C	964	ALA	3.9
1	F	818	LYS	3.9
1	F	900	LYS	3.9
1	F	797	ALA	3.9
1	F	899	VAL	3.9
1	F	949	GLY	3.9
1	D	728	LEU	3.9
1	C	911	VAL	3.9
1	E	1263	VAL	3.8
1	F	682	TYR	3.8
1	C	61	GLN	3.8
1	F	1031	VAL	3.8
1	B	961	GLU	3.8
1	F	746	GLU	3.8
1	F	937	LYS	3.8
1	F	939	GLY	3.8
1	D	1220	ALA	3.8
1	E	1200	ALA	3.8
1	F	128	GLY	3.8
1	F	352	MET	3.8
1	E	1062	ASP	3.8

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Mol	Chain	Res	Type	RSRZ
1	F	377	VAL	3.8
1	E	1048	VAL	3.8
1	F	997	ASN	3.8
1	B	904	LYS	3.8
1	F	650	HIS	3.8
1	F	888	VAL	3.8
1	E	959	ILE	3.8
1	F	597	LEU	3.8
1	F	115	TYR	3.8
1	F	438	SER	3.8
1	E	1053	LEU	3.7
1	F	18	GLU	3.7
1	F	228	GLN	3.7
1	F	337	ALA	3.7
1	E	888	VAL	3.7
1	E	1172	TYR	3.7
1	F	628	ALA	3.7
1	E	20	VAL	3.7
1	F	690	GLU	3.7
1	E	1132	PHE	3.7
1	E	1224	SER	3.7
1	F	904	LYS	3.7
1	E	932	ASP	3.7
1	F	735	ALA	3.7
1	B	901	THR	3.7
1	F	726	MET	3.6
1	B	988	LEU	3.6
1	E	1126	ASP	3.6
1	F	178	LEU	3.6
1	F	942	SER	3.6
1	F	1003	THR	3.6
1	F	153	ILE	3.6
1	C	13	MET	3.6
1	E	1002	TRP	3.6
1	F	150	GLU	3.6
1	E	914	ARG	3.6
1	F	424	PHE	3.6
1	B	926	THR	3.6
1	F	22	SER	3.5
1	B	1024	VAL	3.5
1	F	383	VAL	3.5
1	F	694	ILE	3.5

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Mol	Chain	Res	Type	RSRZ
1	D	1222	LEU	3.5
1	F	729	THR	3.5
1	D	1108	PHE	3.5
1	F	240	ALA	3.5
1	F	558	LEU	3.5
1	F	980	LEU	3.5
1	D	794	VAL	3.5
1	E	1119	ILE	3.5
1	F	324	VAL	3.5
1	F	642	TRP	3.5
1	E	1008	THR	3.5
1	C	898	TYR	3.5
1	E	1080	ALA	3.5
1	F	952	ILE	3.5
1	E	1063	LYS	3.5
1	E	940	SER	3.5
1	F	860	VAL	3.5
1	E	1194	PRO	3.5
1	F	896	ASN	3.5
1	C	649	LEU	3.4
1	C	1106	ILE	3.4
1	E	936	ALA	3.4
1	E	1130	VAL	3.4
1	B	891	PHE	3.4
1	B	981	PRO	3.4
1	E	946	THR	3.4
1	F	672	VAL	3.4
1	C	980	LEU	3.4
1	F	1063	LYS	3.4
1	F	1013	ALA	3.4
1	E	1157	THR	3.4
1	F	517	TYR	3.4
1	F	95	SER	3.4
1	F	698	SER	3.4
1	F	1059	ILE	3.4
1	B	621	TYR	3.4
1	F	147	PHE	3.4
1	A	988	LEU	3.4
1	F	398	TYR	3.4
1	C	1028	GLU	3.4
1	A	941	PHE	3.4
1	F	1017	LYS	3.3

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Mol	Chain	Res	Type	RSRZ
1	E	1177	VAL	3.3
1	F	1114	GLN	3.3
1	E	654	ALA	3.3
1	B	19	VAL	3.3
1	F	1179	ALA	3.3
1	D	966	LEU	3.3
1	F	589	TYR	3.3
1	E	1045	GLY	3.3
1	F	39	TRP	3.3
1	D	807	ASN	3.3
1	F	701	LYS	3.3
1	E	944	ALA	3.3
1	C	908	PRO	3.3
1	D	538	ILE	3.3
1	D	811	PHE	3.3
1	C	956	VAL	3.3
1	D	987	VAL	3.3
1	F	392	ASN	3.3
1	F	354	VAL	3.3
1	E	1262	THR	3.3
1	F	576	TRP	3.3
1	F	774	ASP	3.3
1	A	959	ILE	3.2
1	F	734	TRP	3.2
1	F	301	PHE	3.2
1	F	883	SER	3.2
1	E	1122	TYR	3.2
1	F	807	ASN	3.2
1	F	862	ALA	3.2
1	F	176	VAL	3.2
1	F	271	TRP	3.2
1	A	1032	THR	3.2
1	C	946	THR	3.2
1	F	306	PHE	3.2
1	D	655	TRP	3.2
1	F	401	TRP	3.2
1	F	886	LYS	3.2
1	D	965	LEU	3.2
1	F	384	PHE	3.2
1	E	506	VAL	3.2
1	F	96	PHE	3.2
1	D	1270	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
1	B	1184	VAL	3.2
1	C	914	ARG	3.1
1	A	271	TRP	3.1
1	F	912	GLU	3.1
1	F	368	LEU	3.1
1	F	601	THR	3.1
1	F	713	TYR	3.1
1	E	949	GLY	3.1
1	F	35	PHE	3.1
1	E	977	PRO	3.1
1	F	536	SER	3.1
1	C	794	VAL	3.1
1	F	148	GLY	3.1
1	B	957	THR	3.1
1	D	1205	ILE	3.1
1	A	966	LEU	3.1
1	F	941	PHE	3.1
1	D	1010	TYR	3.1
1	E	1066	ASP	3.1
1	C	942	SER	3.1
1	C	984	ARG	3.1
1	B	1033	ALA	3.1
1	B	955	ARG	3.1
1	A	964	ALA	3.0
1	F	794	VAL	3.0
1	D	1272	ARG	3.0
1	E	1039	ARG	3.0
1	C	886	LYS	3.0
1	D	621	TYR	3.0
1	F	577	TYR	3.0
1	A	681	LEU	3.0
1	F	139	PHE	3.0
1	F	1098	LYS	3.0
1	F	1184	VAL	3.0
1	F	314	LEU	3.0
1	F	1100	GLY	3.0
1	F	379	VAL	3.0
1	F	789	TYR	3.0
1	F	531	GLY	3.0
1	E	1131	ARG	3.0
1	A	805	ALA	3.0
1	E	1038	GLN	3.0

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Mol	Chain	Res	Type	RSRZ
1	C	90	GLY	3.0
1	F	633	ASP	3.0
1	D	742	GLU	3.0
1	E	670	VAL	3.0
1	F	374	GLU	3.0
1	F	114	VAL	3.0
1	E	897	TYR	2.9
1	F	1010	TYR	2.9
1	E	529	ILE	2.9
1	F	1119	ILE	2.9
1	F	180	VAL	2.9
1	F	1033	ALA	2.9
1	A	874	ILE	2.9
1	B	927	TRP	2.9
1	E	566	VAL	2.9
1	F	1124	PHE	2.9
1	C	892	TYR	2.9
1	D	1202	LEU	2.9
1	E	1133	PRO	2.9
1	C	951	LYS	2.9
1	F	61	GLN	2.9
1	F	793	ASP	2.9
1	D	998	PHE	2.9
1	F	768	ALA	2.9
1	B	950	GLN	2.9
1	F	1182	VAL	2.9
1	F	1001	ASP	2.9
1	F	991	GLY	2.9
1	D	1152	LEU	2.9
1	F	957	THR	2.9
1	B	1149	TRP	2.9
1	A	561	TYR	2.9
1	A	794	VAL	2.9
1	B	566	VAL	2.9
1	C	637	PHE	2.9
1	D	679	VAL	2.9
1	F	1009	VAL	2.9
1	F	728	LEU	2.9
1	E	1064	GLN	2.8
1	E	1054	ARG	2.8
1	F	771	LEU	2.8
1	E	561	TYR	2.8

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Mol	Chain	Res	Type	RSRZ
1	F	336	VAL	2.8
1	C	1019	PRO	2.8
1	E	332	SER	2.8
1	E	1005	PRO	2.8
1	F	1140	ILE	2.8
1	F	1205	ILE	2.8
1	F	500	LEU	2.8
1	F	814	LYS	2.8
1	B	987	VAL	2.8
1	C	987	VAL	2.8
1	F	893	TYR	2.8
1	D	1253	ALA	2.8
1	E	858	ILE	2.8
1	F	172	ILE	2.8
1	C	679	VAL	2.8
1	C	1152	LEU	2.8
1	D	822	VAL	2.8
1	B	624	ILE	2.8
1	F	231	PHE	2.8
1	B	900	LYS	2.8
1	D	493	SER	2.8
1	F	890	SER	2.8
1	D	210	LEU	2.8
1	F	1198	VAL	2.8
1	F	738	THR	2.8
1	B	895	ARG	2.7
1	F	100	ARG	2.7
1	F	250	SER	2.7
1	F	1115	GLN	2.7
1	C	897	TYR	2.7
1	E	1067	THR	2.7
1	C	860	VAL	2.7
1	E	1114	GLN	2.7
1	E	1127	SER	2.7
1	F	444	LEU	2.7
1	F	1152	LEU	2.7
1	D	84	TYR	2.7
1	A	771	LEU	2.7
1	B	1094	TRP	2.7
1	A	911	VAL	2.7
1	F	685	PRO	2.7
1	F	332	SER	2.7

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Mol	Chain	Res	Type	RSRZ
1	C	92	TYR	2.7
1	B	794	VAL	2.7
1	B	1207	LEU	2.7
1	F	712	VAL	2.7
1	D	624	ILE	2.7
1	F	606	THR	2.7
1	A	292	LEU	2.7
1	A	792	VAL	2.7
1	A	1182	VAL	2.7
1	C	849	VAL	2.7
1	F	979	VAL	2.7
1	A	147	PHE	2.7
1	D	312	PHE	2.7
1	A	849	VAL	2.7
1	C	155	VAL	2.7
1	D	649	LEU	2.7
1	B	937	LYS	2.7
1	C	944	ALA	2.7
1	F	864	ALA	2.7
1	B	898	TYR	2.7
1	C	1035	ILE	2.7
1	E	1044	ILE	2.7
1	F	1142	ILE	2.7
1	C	787	LEU	2.7
1	E	1213	LYS	2.7
1	F	905	PRO	2.7
1	A	1010	TYR	2.6
1	A	845	VAL	2.6
1	F	634	THR	2.6
1	B	939	GLY	2.6
1	E	1153	ALA	2.6
1	E	1110	TYR	2.6
1	E	1170	TYR	2.6
1	F	21	TYR	2.6
1	F	801	ILE	2.6
1	E	985	PRO	2.6
1	F	985	PRO	2.6
1	E	1273	VAL	2.6
1	A	655	TRP	2.6
1	A	788	SER	2.6
1	B	893	TYR	2.6
1	A	1018	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
1	F	62	VAL	2.6
1	B	1106	ILE	2.6
1	E	651	ILE	2.6
1	F	903	ASN	2.6
1	F	1005	PRO	2.6
1	C	426	LEU	2.6
1	A	324	VAL	2.6
1	C	180	VAL	2.6
1	D	670	VAL	2.6
1	F	135	SER	2.6
1	A	1019	PRO	2.6
1	E	948	ALA	2.6
1	F	828	PRO	2.6
1	C	529	ILE	2.6
1	E	1141	GLN	2.6
1	F	273	ILE	2.6
1	C	1031	VAL	2.6
1	B	1104	ALA	2.6
1	D	654	ALA	2.6
1	D	803	PRO	2.6
1	B	1140	ILE	2.6
1	A	899	VAL	2.6
1	F	338	ASN	2.6
1	B	1275	THR	2.5
1	E	1138	THR	2.5
1	A	993	VAL	2.5
1	C	732	VAL	2.5
1	C	1000	VAL	2.5
1	D	1031	VAL	2.5
1	E	1183	LYS	2.5
1	B	561	TYR	2.5
1	C	636	TYR	2.5
1	E	635	TYR	2.5
1	C	961	GLU	2.5
1	F	451	GLY	2.5
1	E	601	THR	2.5
1	C	214	VAL	2.5
1	D	566	VAL	2.5
1	E	1018	VAL	2.5
1	F	456	VAL	2.5
1	D	805	ALA	2.5
1	E	790	ILE	2.5

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Mol	Chain	Res	Type	RSRZ
1	F	751	ILE	2.5
1	F	302	ARG	2.5
1	F	449	MET	2.5
1	E	1042	VAL	2.5
1	B	1205	ILE	2.5
1	D	357	ILE	2.5
1	E	1058	ASN	2.5
1	F	874	ILE	2.5
1	E	679	VAL	2.5
1	E	1037	VAL	2.5
1	B	459	PHE	2.5
1	F	459	PHE	2.5
1	A	840	ALA	2.5
1	E	1100	GLY	2.5
1	D	959	ILE	2.5
1	E	874	ILE	2.5
1	C	412	VAL	2.5
1	D	354	VAL	2.5
1	E	712	VAL	2.5
1	F	259	VAL	2.5
1	F	956	VAL	2.5
1	E	1032	THR	2.5
1	C	938	ALA	2.5
1	E	838	ARG	2.5
1	E	70	ILE	2.5
1	F	466	LEU	2.5
1	C	62	VAL	2.5
1	C	580	VAL	2.5
1	D	1263	VAL	2.5
1	F	40	LYS	2.5
1	C	145	ALA	2.5
1	D	565	ALA	2.5
1	F	936	ALA	2.5
1	F	544	TYR	2.5
1	A	251	ILE	2.5
1	A	538	ILE	2.5
1	C	281	VAL	2.5
1	F	889	ARG	2.5
1	E	21	TYR	2.5
1	A	226	LEU	2.5
1	C	102	LEU	2.5
1	D	178	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
1	D	651	ILE	2.5
1	F	38	ASN	2.5
1	A	987	VAL	2.5
1	B	1120	VAL	2.5
1	C	285	VAL	2.5
1	F	184	VAL	2.5
1	A	654	ALA	2.5
1	A	486	ILE	2.5
1	B	378	LEU	2.5
1	D	466	LEU	2.5
1	E	226	LEU	2.5
1	F	520	ILE	2.5
1	F	529	ILE	2.5
1	F	718	LYS	2.4
1	E	986	ALA	2.4
1	F	10	THR	2.4
1	D	652	LEU	2.4
1	B	792	VAL	2.4
1	F	319	VAL	2.4
1	C	550	GLY	2.4
1	E	1013	ALA	2.4
1	D	606	THR	2.4
1	E	649	LEU	2.4
1	F	421	TRP	2.4
1	F	790	ILE	2.4
1	F	1222	LEU	2.4
1	B	120	VAL	2.4
1	B	1018	VAL	2.4
1	F	9	SER	2.4
1	F	755	SER	2.4
1	E	1093	ASN	2.4
1	E	24	ALA	2.4
1	F	652	LEU	2.4
1	A	601	THR	2.4
1	C	11	THR	2.4
1	C	517	TYR	2.4
1	E	1082	THR	2.4
1	F	627	THR	2.4
1	B	930	VAL	2.4
1	B	1215	VAL	2.4
1	C	163	SER	2.4
1	B	902	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
1	F	60	GLN	2.4
1	C	1016	VAL	2.4
1	D	576	TRP	2.4
1	E	1196	GLY	2.4
1	F	550	GLY	2.4
1	B	959	ILE	2.4
1	D	109	ILE	2.4
1	E	92	TYR	2.4
1	F	442	TRP	2.4
1	E	1212	SER	2.4
1	F	349	LEU	2.4
1	E	955	ARG	2.4
1	B	17	PRO	2.4
1	C	184	VAL	2.4
1	E	660	VAL	2.4
1	E	1019	PRO	2.4
1	F	230	VAL	2.4
1	F	284	GLU	2.4
1	F	1019	PRO	2.4
1	A	651	ILE	2.4
1	F	691	LYS	2.4
1	D	590	VAL	2.4
1	D	753	GLU	2.4
1	F	133	GLY	2.4
1	F	810	THR	2.4
1	E	1065	SER	2.4
1	F	677	ALA	2.4
1	C	1030	LYS	2.4
1	D	348	ILE	2.4
1	E	1139	LYS	2.4
1	D	1186	VAL	2.3
1	E	956	VAL	2.3
1	E	678	LYS	2.3
1	F	11	THR	2.3
1	E	314	LEU	2.3
1	F	378	LEU	2.3
1	F	25	VAL	2.3
1	F	868	GLN	2.3
1	B	558	LEU	2.3
1	C	681	LEU	2.3
1	C	931	SER	2.3
1	D	563	ASN	2.3

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Mol	Chain	Res	Type	RSRZ
1	E	894	SER	2.3
1	F	622	PHE	2.3
1	E	849	VAL	2.3
1	F	328	HIS	2.3
1	F	660	VAL	2.3
1	B	21	TYR	2.3
1	B	577	TYR	2.3
1	A	848	ILE	2.3
1	B	980	LEU	2.3
1	D	1271	ILE	2.3
1	E	466	LEU	2.3
1	D	306	PHE	2.3
1	A	679	VAL	2.3
1	C	671	VAL	2.3
1	F	371	VAL	2.3
1	F	984	ARG	2.3
1	D	636	TYR	2.3
1	E	1010	TYR	2.3
1	F	530	TYR	2.3
1	F	961	GLU	2.3
1	E	1201	GLY	2.3
1	F	699	PHE	2.3
1	A	860	VAL	2.3
1	C	377	VAL	2.3
1	F	66	HIS	2.3
1	A	1110	TYR	2.3
1	F	94	LYS	2.3
1	A	811	PHE	2.3
1	C	306	PHE	2.3
1	A	1261	VAL	2.3
1	E	1167	VAL	2.3
1	F	947	VAL	2.3
1	F	126	LYS	2.3
1	F	951	LYS	2.3
1	C	846	LEU	2.3
1	D	862	ALA	2.3
1	F	496	MET	2.3
1	E	509	THR	2.3
1	A	670	VAL	2.3
1	F	580	VAL	2.3
1	F	813	VAL	2.3
1	F	213	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
1	E	1280	HIS	2.3
1	B	652	LEU	2.3
1	B	1202	LEU	2.3
1	C	333	LEU	2.3
1	A	430	ILE	2.3
1	D	561	TYR	2.3
1	F	93	ARG	2.3
1	E	811	PHE	2.3
1	B	601	THR	2.3
1	E	732	VAL	2.3
1	E	957	THR	2.3
1	E	1015	THR	2.3
1	B	1019	PRO	2.3
1	F	914	ARG	2.3
1	A	593	GLY	2.3
1	C	1116	LEU	2.3
1	C	153	ILE	2.3
1	F	636	TYR	2.3
1	A	807	ASN	2.2
1	B	1000	VAL	2.2
1	F	229	THR	2.2
1	D	597	LEU	2.2
1	C	952	ILE	2.2
1	F	799	GLY	2.2
1	F	968	TYR	2.2
1	E	671	VAL	2.2
1	E	1009	VAL	2.2
1	A	493	SER	2.2
1	A	564	SER	2.2
1	D	564	SER	2.2
1	F	852	THR	2.2
1	D	1033	ALA	2.2
1	D	1116	LEU	2.2
1	E	816	ALA	2.2
1	A	790	ILE	2.2
1	D	35	PHE	2.2
1	D	1002	TRP	2.2
1	E	452	ILE	2.2
1	B	947	VAL	2.2
1	C	20	VAL	2.2
1	F	205	ASN	2.2
1	C	919	THR	2.2

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Mol	Chain	Res	Type	RSRZ
1	F	99	ASP	2.2
1	F	333	LEU	2.2
1	A	1106	ILE	2.2
1	C	224	ILE	2.2
1	C	357	ILE	2.2
1	C	369	ILE	2.2
1	D	1035	ILE	2.2
1	E	263	ILE	2.2
1	E	624	ILE	2.2
1	F	481	TYR	2.2
1	F	915	TYR	2.2
1	F	1170	TYR	2.2
1	D	770	LYS	2.2
1	E	668	VAL	2.2
1	C	597	LEU	2.2
1	F	887	THR	2.2
1	D	985	PRO	2.2
1	B	636	TYR	2.2
1	C	84	TYR	2.2
1	E	556	LYS	2.2
1	E	900	LYS	2.2
1	E	1017	LYS	2.2
1	F	387	TRP	2.2
1	F	727	TYR	2.2
1	B	712	VAL	2.2
1	D	943	VAL	2.2
1	F	1117	GLY	2.2
1	C	907	LEU	2.2
1	D	333	LEU	2.2
1	E	1155	THR	2.2
1	F	102	LEU	2.2
1	F	292	LEU	2.2
1	D	874	ILE	2.2
1	F	816	ALA	2.2
1	F	1054	ARG	2.2
1	D	1110	TYR	2.2
1	A	1116	LEU	2.2
1	B	540	SER	2.2
1	D	941	PHE	2.2
1	F	224	ILE	2.2
1	F	847	ALA	2.2
1	C	1280	HIS	2.2

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Mol	Chain	Res	Type	RSRZ
1	D	155	VAL	2.2
1	F	802	VAL	2.2
1	D	746	GLU	2.2
1	C	896	ASN	2.2
1	C	960	ASP	2.2
1	F	210	LEU	2.2
1	F	848	ILE	2.2
1	F	669	PRO	2.2
1	F	1176	PRO	2.2
1	B	1168	LYS	2.2
1	C	107	ILE	2.2
1	F	1224	SER	2.2
1	D	724	LYS	2.2
1	C	813	VAL	2.2
1	C	1186	VAL	2.2
1	B	728	LEU	2.1
1	D	558	LEU	2.1
1	A	775	ALA	2.1
1	B	1253	ALA	2.1
1	D	801	ILE	2.1
1	E	1135	ALA	2.1
1	C	863	LYS	2.1
1	B	429	THR	2.1
1	D	19	VAL	2.1
1	D	1182	VAL	2.1
1	F	346	VAL	2.1
1	F	593	GLY	2.1
1	F	1197	VAL	2.1
1	C	500	LEU	2.1
1	E	728	LEU	2.1
1	F	594	PHE	2.1
1	E	153	ILE	2.1
1	F	440	ILE	2.1
1	A	956	VAL	2.1
1	F	311	GLY	2.1
1	F	695	GLY	2.1
1	C	589	TYR	2.1
1	F	278	LEU	2.1
1	B	369	ILE	2.1
1	C	1018	VAL	2.1
1	D	1000	VAL	2.1
1	D	1207	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
1	E	966	LEU	2.1
1	C	807	ASN	2.1
1	E	155	VAL	2.1
1	E	336	VAL	2.1
1	F	843	GLY	2.1
1	E	992	THR	2.1
1	E	1003	THR	2.1
1	B	811	PHE	2.1
1	E	84	TYR	2.1
1	E	1190	ASP	2.1
1	B	651	ILE	2.1
1	E	1102	ASN	2.1
1	F	437	PRO	2.1
1	A	1273	VAL	2.1
1	F	291	VAL	2.1
1	B	1187	THR	2.1
1	C	1108	PHE	2.1
1	F	84	TYR	2.1
1	B	948	ALA	2.1
1	E	862	ALA	2.1
1	A	930	VAL	2.1
1	B	672	VAL	2.1
1	B	1048	VAL	2.1
1	E	352	MET	2.1
1	F	91	TRP	2.1
1	E	1068	LEU	2.1
1	F	1053	LEU	2.1
1	A	559	THR	2.1
1	B	581	GLN	2.1
1	D	107	ILE	2.1
1	D	577	TYR	2.1
1	C	955	ARG	2.1
1	A	285	VAL	2.1
1	C	19	VAL	2.1
1	C	383	VAL	2.1
1	A	630	PHE	2.1
1	A	1002	TRP	2.1
1	B	1108	PHE	2.1
1	D	772	LYS	2.1
1	E	953	SER	2.1
1	F	1118	GLN	2.1
1	A	1158	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
1	D	440	ILE	2.1
1	A	157	VAL	2.1
1	E	860	VAL	2.1
1	B	1025	PHE	2.1
1	D	787	LEU	2.0
1	A	339	ARG	2.0
1	C	98	ILE	2.0
1	C	978	ALA	2.0
1	E	115	TYR	2.0
1	F	429	THR	2.0
1	E	380	VAL	2.0
1	D	1181	PHE	2.0
1	E	597	LEU	2.0
1	C	1119	ILE	2.0
1	E	532	SER	2.0
1	F	761	SER	2.0
1	C	885	GLU	2.0
1	E	167	TYR	2.0
1	F	710	TYR	2.0
1	F	1200	ALA	2.0
1	F	742	GLU	2.0
1	A	1037	VAL	2.0
1	D	285	VAL	2.0
1	C	988	LEU	2.0
1	D	846	LEU	2.0
1	D	1106	ILE	2.0
1	A	565	ALA	2.0
1	B	22	SER	2.0
1	E	1179	ALA	2.0
1	F	975	GLY	2.0
1	F	303	TRP	2.0
1	B	1185	THR	2.0
1	D	592	THR	2.0
1	E	585	VAL	2.0
1	F	585	VAL	2.0
1	D	1025	PHE	2.0
1	B	771	LEU	2.0
1	F	64	LEU	2.0
1	B	1208	LYS	2.0
1	A	773	ALA	2.0
1	E	1047	SER	2.0
1	F	944	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
1	F	1104	ALA	2.0
1	F	469	TRP	2.0
1	B	534	THR	2.0
1	D	191	VAL	2.0
1	D	230	VAL	2.0
1	D	534	THR	2.0
1	D	1018	VAL	2.0
1	E	1012	THR	2.0
1	F	155	VAL	2.0
1	A	699	PHE	2.0
1	A	891	PHE	2.0
1	A	652	LEU	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 monosaccharides in this entry.

6.4 Ligands (i)

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
2	SO4	F	2301	5/5	0.71	0.25	174,178,185,188	0
3	GOL	A	2303	6/6	0.78	0.26	76,103,120,133	0
4	CA	E	2304	1/1	0.83	0.10	279,279,279,279	0
3	GOL	D	2303	6/6	0.85	0.20	92,111,124,130	0
3	GOL	F	2302	6/6	0.86	0.27	106,134,150,151	0
4	CA	F	2304	1/1	0.87	0.09	216,216,216,216	0
3	GOL	E	2302	6/6	0.88	0.40	77,100,124,196	0
4	CA	A	2304	1/1	0.91	0.08	116,116,116,116	0
3	GOL	A	2302	6/6	0.92	0.38	48,76,85,93	0
4	CA	B	2304	1/1	0.92	0.10	140,140,140,140	0
3	GOL	B	2302	6/6	0.92	0.19	71,72,77,89	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
3	GOL	D	2302	6/6	0.92	0.37	86,92,100,104	0
4	CA	D	2304	1/1	0.94	0.06	146,146,146,146	0
3	GOL	C	2302	6/6	0.95	0.29	63,76,85,99	0
2	SO4	D	2301	5/5	0.97	0.21	78,107,131,132	0
2	SO4	C	2301	5/5	0.98	0.22	81,93,105,108	0
2	SO4	A	2301	5/5	0.98	0.25	54,72,83,111	0
4	CA	C	2304	1/1	0.99	0.04	138,138,138,138	0

6.5 Other polymers (i)

There are no such residues in this entry.