Full wwPDB X-ray Structure Validation Report ⓘ

Apr 22, 2025 – 12:08 PM JST

PDB ID	:	9ULA / pdb_00009ula
Title	:	Cryogenic temperature crystal structure of Nmar_1308 protein at 2.96 angstrom resolution
Authors	:	Destan, E.; DeMirci, H.
Deposited on	:	2025-04-19
Resolution	:	2.96 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:

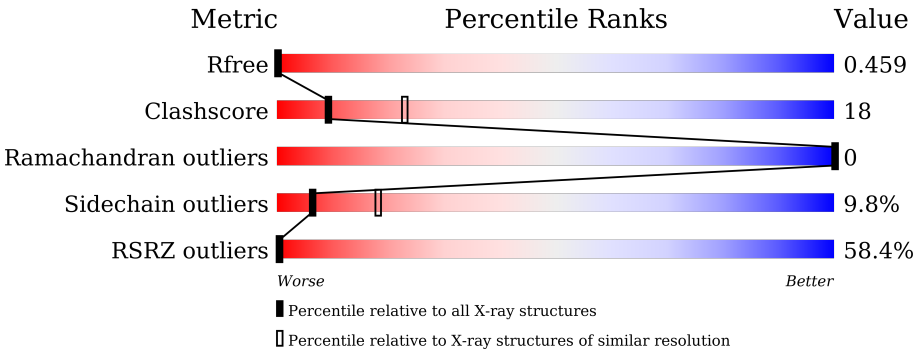
MolProbity	:	4.02b-467
Xtriage (Phenix)	:	2.0rc1
EDS	:	3.0
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.006 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.42

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 2.96 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}	164625	1044 (2.98-2.94)
Clashscore	180529	1097 (2.98-2.94)
Ramachandran outliers	177936	1049 (2.98-2.94)
Sidechain outliers	177891	1049 (2.98-2.94)
RSRZ outliers	164620	1044 (2.98-2.94)

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	246	60% 65% 31%
1	B	246	63% 57% 37%
1	C	246	44% 62% 31%
1	D	246	58% 52% 43%
1	E	246	57% 57% 36%
1	F	246	61% 59% 38%

2 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 10893 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 Enoyl-CoA hydratase/isomerase.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	A	242	Total	C	N	O	S	0	0	0
			1812	1131	313	354	14			
1	B	242	Total	C	N	O	S	0	0	0
			1807	1127	311	356	13			
1	C	236	Total	C	N	O	S	0	1	0
			1779	1115	306	344	14			
1	D	242	Total	C	N	O	S	0	0	0
			1807	1127	311	356	13			
1	E	241	Total	C	N	O	S	0	1	0
			1809	1131	311	353	14			
1	F	243	Total	C	N	O	S	0	2	0
			1832	1143	314	361	14			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	0	HIS	-	expression tag	UNP A9A2G5
B	0	HIS	-	expression tag	UNP A9A2G5
C	0	HIS	-	expression tag	UNP A9A2G5
D	0	HIS	-	expression tag	UNP A9A2G5
E	0	HIS	-	expression tag	UNP A9A2G5
F	0	HIS	-	expression tag	UNP A9A2G5

- Molecule 2 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	A	8	Total	O	0	0
			8	8		
2	B	7	Total	O	0	0
			7	7		
2	C	9	Total	O	0	0
			9	9		

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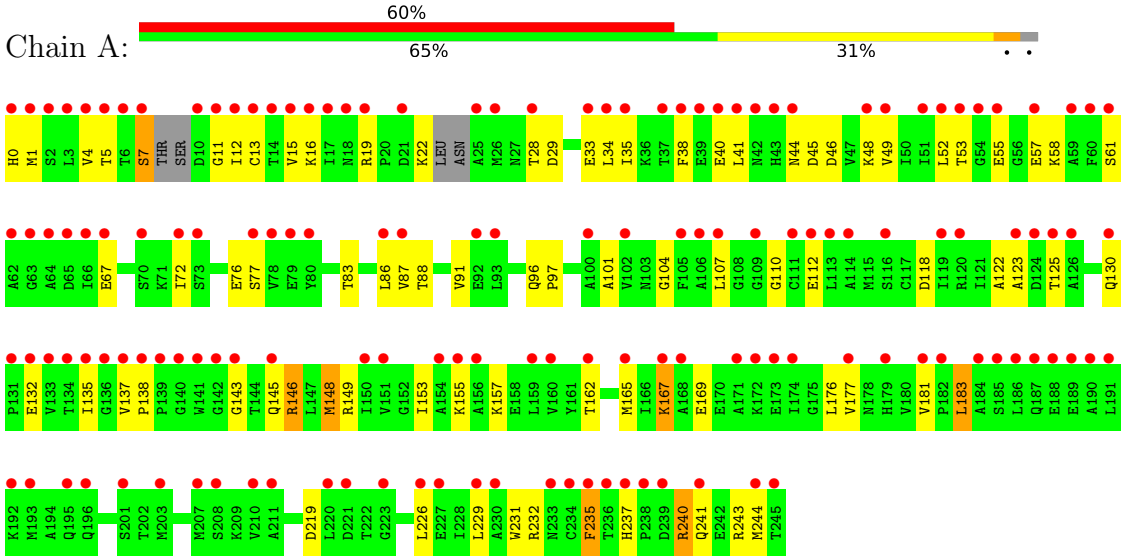
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
2	D	5	Total O 5 5	0	0
2	E	10	Total O 10 10	0	0
2	F	8	Total O 8 8	0	0

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.

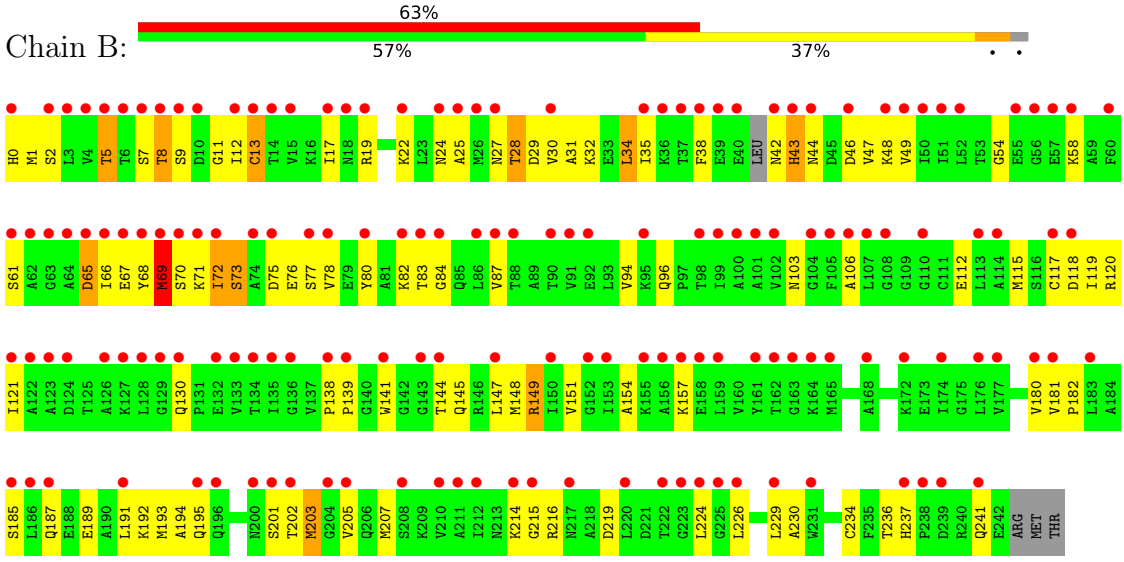
• Molecule 1: Enoyl-CoA hydratase/isomerase

Chain A:



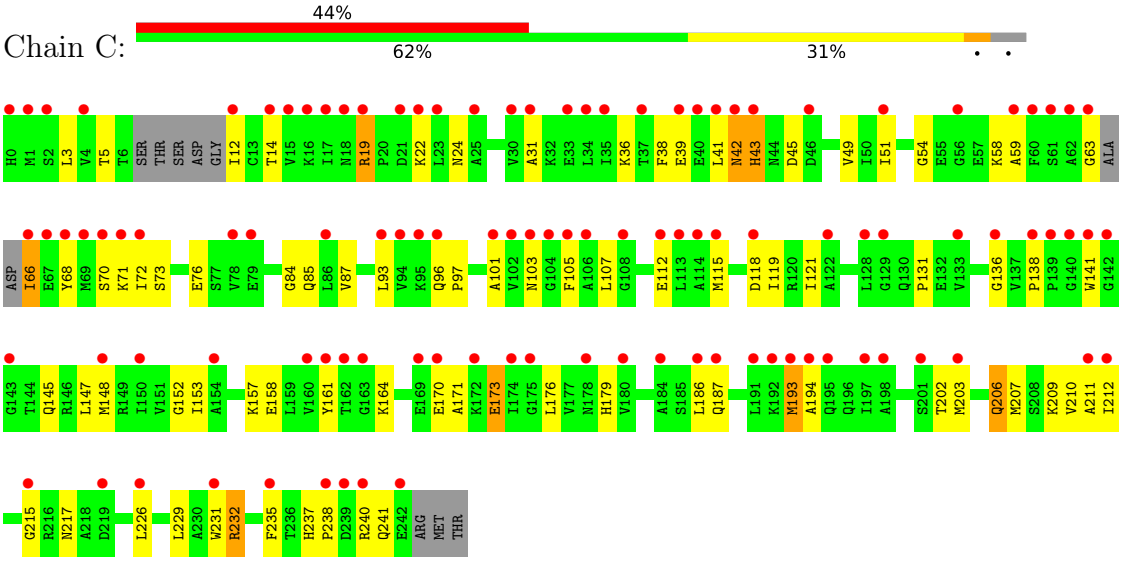
• Molecule 1: Enoyl-CoA hydratase/isomerase

Chain B:



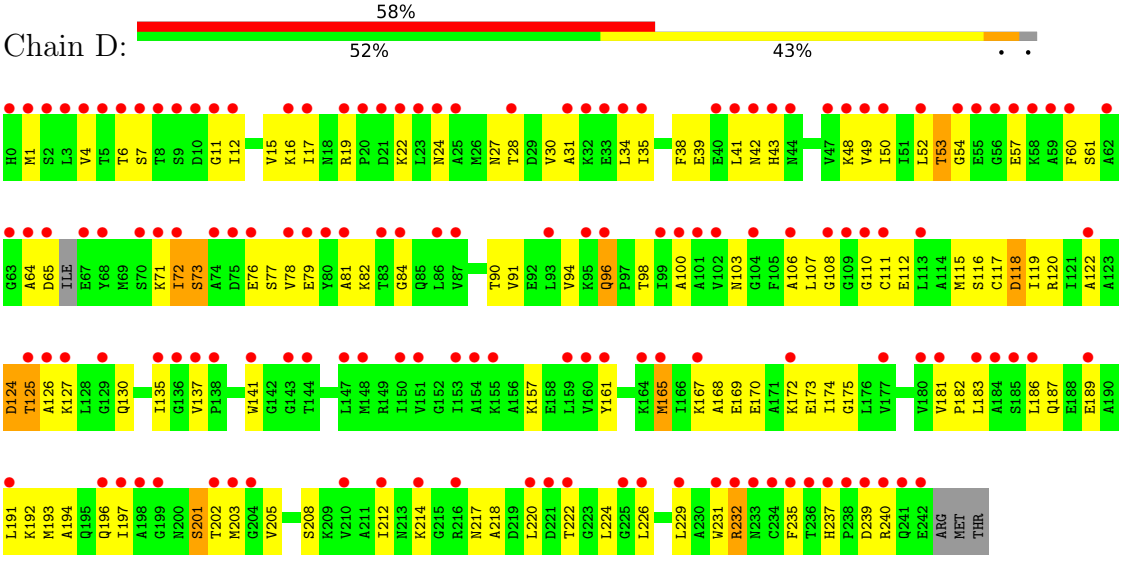
• Molecule 1: Enoyl-CoA hydratase/isomerase

Chain C:



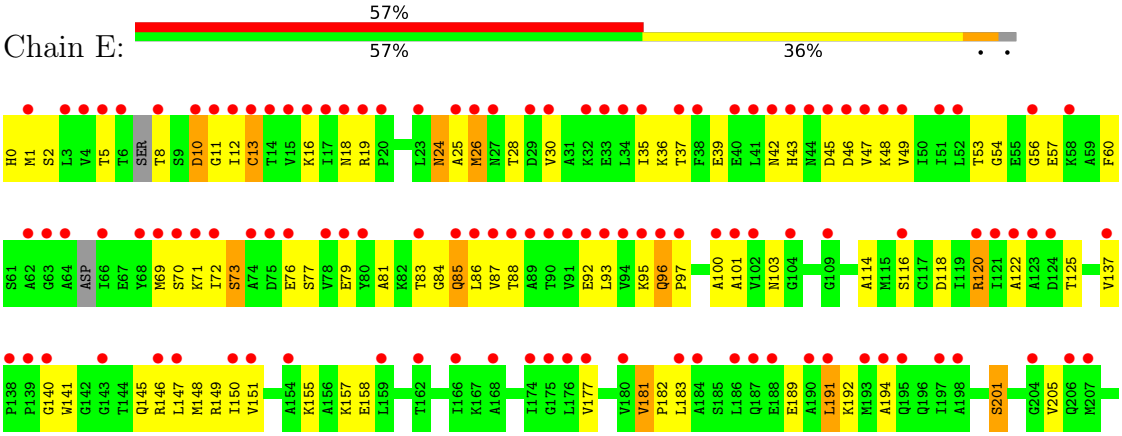
• Molecule 1: Enoyl-CoA hydratase/isomerase

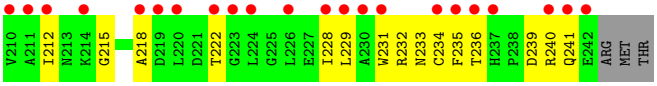
Chain D:



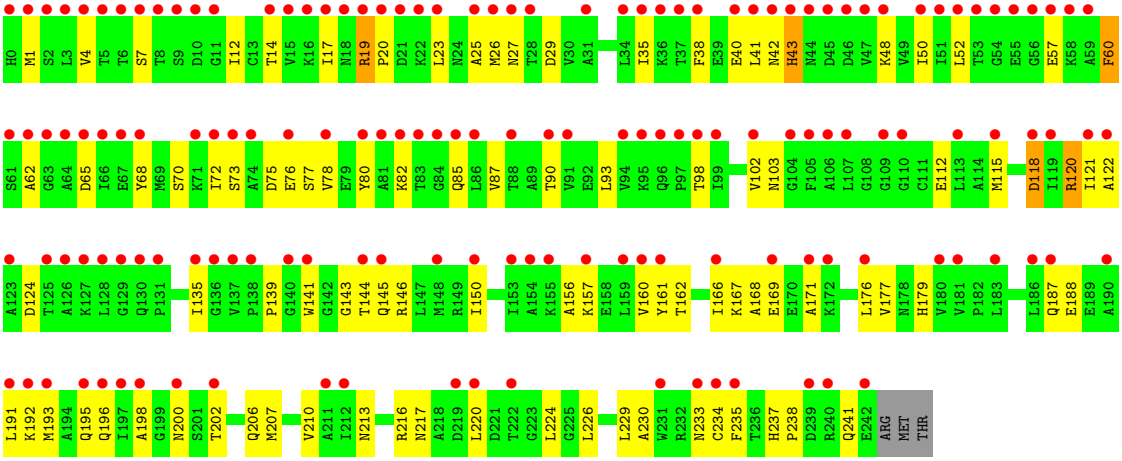
• Molecule 1: Enoyl-CoA hydratase/isomerase

Chain E:





• Molecule 1: Enoyl-CoA hydratase/isomerase



4 Data and refinement statistics (i)

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, α, β, γ	356.96Å 130.53Å 82.64Å 90.00° 100.17° 90.00°	Depositor
Resolution (Å)	43.92 – 2.96 43.92 – 2.96	Depositor EDS
% Data completeness (in resolution range)	99.9 (43.92-2.96) 99.9 (43.92-2.96)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.55 (at 2.96Å)	Xtriage
Refinement program	PHENIX (1.19.2_4158: ???)	Depositor
R, R_{free}	0.442 , 0.461 0.443 , 0.459	Depositor DCC
R_{free} test set	75788 reflections (2.58%)	wwPDB-VP
Wilson B-factor (Å^2)	54.2	Xtriage
Anisotropy	0.392	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.30 , 43.8	EDS
L-test for twinning[2]	$< \|L\| > = 0.49$, $< L^2 > = 0.32$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.64	EDS
Total number of atoms	10893	wwPDB-VP
Average B, all atoms (Å^2)	50.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 3.78% 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

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	0.27	0/1831	0.51	0/2468
1	B	0.28	0/1827	0.52	1/2466 (0.0%)
1	C	0.26	0/1798	0.49	0/2424
1	D	0.28	0/1827	0.55	0/2466
1	E	0.26	0/1828	0.52	0/2465
1	F	0.27	0/1853	0.51	0/2502
All	All	0.27	0/10964	0.52	1/14791 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	F	0	1

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	B	69	MET	CB-CG-SD	5.83	129.88	112.40

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	F	72	ILE	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	1812	0	1852	59	0
1	B	1807	0	1842	88	0
1	C	1779	0	1827	64	0
1	D	1807	0	1842	94	0
1	E	1809	0	1851	80	0
1	F	1832	0	1867	76	0
2	A	8	0	0	2	0
2	B	7	0	0	2	0
2	C	9	0	0	3	0
2	D	5	0	0	1	0
2	E	10	0	0	1	0
2	F	8	0	0	1	0
All	All	10893	0	11081	393	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 18.

All (393) 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:D:214:LYS:HB2	1:D:226:LEU:HD11	1.63	0.80
1:B:19:ARG:HH12	1:B:27:ASN:HD22	1.27	0.79
1:A:1:MET:HE1	1:A:33:GLU:HB3	1.66	0.78
1:A:167:LYS:HD3	1:A:169:GLU:H	1.49	0.78
1:D:73:SER:HB3	1:D:76:GLU:HB3	1.70	0.73
1:B:84:GLY:HA2	1:B:87:VAL:HG12	1.69	0.73
1:B:27:ASN:OD1	1:B:29:ASP:N	2.22	0.73
1:E:45:ASP:O	1:E:48:LYS:NZ	2.22	0.72
1:B:112:GLU:HA	1:B:115:MET:HE2	1.70	0.72
1:B:13:CYS:SG	2:B:304:HOH:O	2.48	0.71
1:B:17:ILE:HD11	1:B:24:ASN:HB3	1.72	0.71
1:A:88:THR:HB	1:A:146:ARG:HH22	1.56	0.71
1:A:240:ARG:HH21	1:A:241:GLN:HB2	1.56	0.70
1:B:224:LEU:HD12	1:C:85:GLN:HE21	1.57	0.69
1:E:235:PHE:HA	1:E:240:ARG:HD2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:22:LYS:NZ	1:A:67:GLU:OE1	2.26	0.68
1:B:7:SER:HB3	1:B:12:ILE:H	1.58	0.68
1:E:92:GLU:HG3	1:E:93:LEU:HD12	1.76	0.68
1:B:72:ILE:H	1:E:240:ARG:HH22	1.41	0.68
1:D:208:SER:O	1:D:212:ILE:HG13	1.95	0.67
1:C:235:PHE:HA	1:C:240:ARG:HD2	1.74	0.67
1:C:119:ILE:HG21	1:C:193[A]:MET:HE1	1.76	0.67
1:D:181:VAL:HG21	1:D:189:GLU:HG3	1.75	0.67
1:E:36:LYS:H	1:E:36:LYS:HD2	1.60	0.67
1:A:38:PHE:HA	1:A:41:LEU:HD12	1.77	0.66
1:D:125:THR:HG21	1:D:183:LEU:HD22	1.77	0.66
1:A:235:PHE:HE2	1:D:77:SER:CB	2.08	0.66
1:E:10:ASP:OD1	1:E:10:ASP:N	2.29	0.66
1:D:16:LYS:HG2	1:D:53:THR:HG23	1.78	0.66
1:D:64:ALA:HB2	1:D:108:GLY:HA3	1.76	0.66
1:E:100:ALA:HB3	1:E:120:ARG:HG3	1.77	0.65
1:B:241:GLN:NE2	1:C:71:LYS:O	2.30	0.65
1:C:101:ALA:HB1	1:C:186:LEU:HD11	1.78	0.65
1:C:226:LEU:HD22	1:F:226:LEU:HG	1.78	0.65
1:A:5:THR:HG22	1:A:13:CYS:HB3	1.78	0.64
1:B:48:LYS:HE3	1:B:202:THR:HG21	1.79	0.64
1:F:193[B]:MET:SD	1:F:196:GLN:NE2	2.71	0.64
1:E:26[A]:MET:HE3	1:E:141:TRP:HZ3	1.63	0.64
1:C:19:ARG:HD3	1:C:22:LYS:HB3	1.79	0.63
1:C:54:GLY:O	1:C:103:ASN:ND2	2.30	0.63
1:D:11:GLY:O	1:D:48:LYS:N	2.31	0.63
1:D:19:ARG:HB3	1:D:24:ASN:HA	1.79	0.63
1:E:79:GLU:OE2	1:F:42:ASN:ND2	2.30	0.63
1:F:68:TYR:HE1	1:F:135:ILE:HD12	1.63	0.63
1:A:16:LYS:HB3	1:A:55:GLU:HG2	1.80	0.63
1:F:35:ILE:HG13	1:F:87:VAL:HG23	1.80	0.62
1:D:76:GLU:O	1:D:76:GLU:HG2	1.99	0.62
1:E:181:VAL:HG11	1:E:189:GLU:HG3	1.81	0.62
1:F:102:VAL:HG12	1:F:122:ALA:HA	1.81	0.62
1:C:152:GLY:N	2:C:301:HOH:O	2.32	0.62
1:A:29:ASP:O	1:A:33:GLU:HG2	2.00	0.61
1:D:231:TRP:NE1	1:F:77:SER:OG	2.34	0.61
1:E:53:THR:HB	1:E:101:ALA:HB3	1.83	0.61
1:B:1:MET:HG3	1:B:17:ILE:HA	1.81	0.61
1:A:88:THR:HB	1:A:146:ARG:NH2	2.15	0.61
1:D:183:LEU:HA	1:D:186:LEU:HD11	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:241:GLN:NE2	1:E:71:LYS:O	2.34	0.61
1:B:216:ARG:HD3	1:C:153:ILE:HD12	1.81	0.60
1:D:157:LYS:HG2	1:D:161:TYR:CZ	2.37	0.60
1:A:231:TRP:CZ3	1:D:137:VAL:HB	2.36	0.60
1:D:118:ASP:HB2	1:D:119:ILE:HD12	1.82	0.60
1:A:41:LEU:O	1:A:96:GLN:NE2	2.33	0.60
1:E:122:ALA:HB2	1:E:177:VAL:HG11	1.83	0.60
1:E:73:SER:HB3	1:E:76:GLU:HB2	1.84	0.59
1:F:23:LEU:HB3	1:F:62:ALA:HB3	1.83	0.59
1:B:219:ASP:HB2	1:C:217:ASN:HB3	1.84	0.59
1:C:24:ASN:ND2	1:C:59:ALA:O	2.34	0.59
1:F:93:LEU:HD13	1:F:213:ASN:HD22	1.68	0.59
1:B:19:ARG:NH1	1:B:27:ASN:HD22	1.99	0.59
1:B:117:CYS:O	1:B:120:ARG:NH1	2.32	0.59
1:A:231:TRP:HZ3	1:D:137:VAL:HB	1.68	0.59
1:F:60:PHE:HD2	1:F:102:VAL:HG23	1.68	0.59
1:C:147:LEU:O	2:C:301:HOH:O	2.17	0.58
1:A:240:ARG:HE	1:A:241:GLN:N	1.99	0.58
1:C:212:ILE:HG23	1:E:148:MET:SD	2.43	0.58
1:C:41:LEU:HD22	1:C:93:LEU:HB2	1.86	0.58
1:D:41:LEU:HD23	1:D:90:THR:HA	1.85	0.58
1:E:145:GLN:O	1:E:149:ARG:NH1	2.37	0.58
1:B:43:HIS:HD2	1:B:96:GLN:HE22	1.50	0.58
1:F:112:GLU:HA	1:F:115:MET:HE2	1.83	0.58
1:D:124:ASP:OD1	1:D:124:ASP:N	2.36	0.58
1:C:210:VAL:HG11	1:F:229:LEU:HD11	1.85	0.57
1:A:1:MET:HE1	1:A:33:GLU:CB	2.34	0.57
1:F:207:MET:HB3	1:F:230:ALA:HB1	1.86	0.57
1:B:201:SER:OG	1:C:136:GLY:HA2	2.05	0.57
1:C:240:ARG:HG3	1:C:241:GLN:N	2.20	0.57
1:A:122:ALA:HB2	1:A:177:VAL:HG11	1.86	0.56
1:C:118:ASP:HB3	1:E:157:LYS:HD3	1.88	0.56
1:D:72:ILE:HD12	1:D:72:ILE:N	2.20	0.56
1:B:54:GLY:O	1:B:103:ASN:ND2	2.34	0.56
1:D:118:ASP:HB3	1:F:157:LYS:HD3	1.87	0.56
1:C:112:GLU:HA	1:C:115:MET:HE2	1.87	0.55
1:E:12:ILE:CD1	1:E:194:ALA:HB1	2.37	0.55
1:B:182:PRO:HG2	1:B:185:SER:HB3	1.88	0.55
1:A:231:TRP:CD1	1:D:81:ALA:HB2	2.42	0.55
1:B:19:ARG:HH12	1:B:27:ASN:ND2	2.01	0.55
1:B:157:LYS:HD3	1:E:118:ASP:HB3	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:39:GLU:OE1	1:D:43:HIS:HA	2.06	0.55
1:E:36:LYS:HD2	1:E:36:LYS:N	2.22	0.55
1:F:27:ASN:OD1	1:F:29:ASP:N	2.40	0.55
1:A:35:ILE:HD13	1:A:86:LEU:HD22	1.88	0.55
1:F:191:LEU:HG	1:F:195:GLN:HE22	1.72	0.55
1:B:22:LYS:HG2	1:B:66:ILE:HD12	1.88	0.54
1:E:35:ILE:HD11	1:E:86:LEU:HD23	1.88	0.54
1:E:95:LYS:HB3	1:E:96:GLN:HE21	1.72	0.54
1:F:156:ALA:O	1:F:160:VAL:HG22	2.08	0.54
1:B:191:LEU:O	1:B:195:GLN:HG3	2.07	0.54
1:C:43:HIS:HB3	1:C:96:GLN:HE22	1.73	0.54
1:C:107:LEU:HD12	1:C:131:PRO:HG3	1.90	0.54
1:B:67:GLU:HB3	1:B:69:MET:SD	2.48	0.54
1:D:72:ILE:HD13	1:D:76:GLU:OE1	2.08	0.54
1:D:222:THR:HG21	1:E:218:ALA:HB2	1.88	0.54
1:F:4:VAL:HG22	1:F:14:THR:HB	1.90	0.54
1:D:57:GLU:OE2	1:D:187:GLN:NE2	2.39	0.53
1:A:235:PHE:HE2	1:D:77:SER:HB3	1.73	0.53
1:A:235:PHE:CE1	1:A:240:ARG:HG3	2.43	0.53
1:C:59:ALA:HA	1:C:105:PHE:H	1.73	0.53
1:E:81:ALA:O	1:E:85:GLN:N	2.34	0.53
1:A:87:VAL:O	1:A:91:VAL:HG22	2.08	0.53
1:D:224:LEU:HD22	1:F:145:GLN:HG3	1.90	0.53
1:A:219:ASP:HB2	1:D:217:ASN:HB3	1.91	0.53
1:B:49:VAL:HG21	1:B:194:ALA:O	2.09	0.53
1:B:149:ARG:NH2	1:E:218:ALA:O	2.42	0.53
1:F:188:GLU:O	1:F:192:LYS:N	2.39	0.53
1:C:229:LEU:HD21	1:F:210:VAL:HG11	1.91	0.53
1:D:224:LEU:HD12	1:F:85:GLN:HE21	1.74	0.53
1:E:48:LYS:HD2	1:E:48:LYS:N	2.24	0.53
1:E:60:PHE:CE2	1:E:114:ALA:HB2	2.43	0.52
1:B:147:LEU:O	1:B:151:VAL:HG12	2.09	0.52
1:E:71:LYS:HG3	1:E:72:ILE:HG23	1.90	0.52
1:F:171:ALA:HB1	1:F:176:LEU:HB3	1.90	0.52
1:B:25:ALA:HB2	1:B:66:ILE:HG13	1.91	0.52
1:B:19:ARG:HH22	1:B:27:ASN:ND2	2.07	0.52
1:C:73:SER:O	1:C:76:GLU:HG2	2.10	0.52
1:F:7:SER:HB3	1:F:12:ILE:H	1.74	0.52
1:A:162:THR:O	1:F:200:ASN:ND2	2.41	0.52
1:F:70:SER:O	1:F:70:SER:OG	2.28	0.52
1:E:181:VAL:HG12	1:E:182:PRO:HD2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:123:ALA:HA	1:A:181:VAL:O	2.10	0.51
1:D:107:LEU:HD21	1:D:165:MET:HG3	1.92	0.51
1:C:121:ILE:HD13	1:C:179:HIS:HB2	1.93	0.51
1:E:8:THR:O	1:E:8:THR:OG1	2.26	0.51
1:F:220:LEU:O	1:F:224:LEU:HD23	2.10	0.51
1:F:42:ASN:N	1:F:42:ASN:OD1	2.44	0.51
1:D:108:GLY:HA2	1:D:130:GLN:HE21	1.74	0.51
1:E:125:THR:HG21	1:E:183:LEU:HD22	1.92	0.51
1:A:226:LEU:HG	1:B:226:LEU:HD13	1.91	0.51
1:D:170:GLU:HA	1:D:173:GLU:HB2	1.93	0.51
1:A:46:ASP:OD1	1:A:46:ASP:N	2.39	0.51
1:C:232:ARG:NE	2:F:305:HOH:O	2.44	0.51
1:A:11:GLY:O	1:A:48:LYS:N	2.34	0.50
1:D:193:MET:O	1:D:197:ILE:HD12	2.11	0.50
1:B:119:ILE:HD11	1:C:161:TYR:HD2	1.75	0.50
1:B:234:CYS:SG	1:C:138:PRO:HD3	2.52	0.50
1:C:171:ALA:HB1	1:C:176:LEU:HB3	1.92	0.50
1:D:19:ARG:HG2	1:D:22:LYS:HB2	1.92	0.50
1:F:139:PRO:HB2	1:F:143:GLY:HA3	1.93	0.50
1:A:83:THR:O	1:A:87:VAL:HG12	2.12	0.50
1:B:7:SER:OG	1:B:11:GLY:N	2.36	0.50
1:D:79:GLU:HA	1:D:82:LYS:HB2	1.94	0.50
1:D:100:ALA:HB2	1:D:117:CYS:SG	2.52	0.50
1:B:84:GLY:HA3	1:B:141:TRP:NE1	2.26	0.50
1:E:56:GLY:O	1:E:57:GLU:HG3	2.11	0.50
1:A:138:PRO:HD3	1:F:234:CYS:SG	2.51	0.50
1:A:235:PHE:CE1	1:A:240:ARG:HD3	2.46	0.50
1:C:39:GLU:HB2	1:C:42:ASN:O	2.12	0.50
1:F:187:GLN:O	1:F:191:LEU:HB2	2.11	0.50
1:C:215:GLY:O	1:E:149:ARG:NH2	2.44	0.50
1:B:181:VAL:HG11	1:B:189:GLU:HG2	1.94	0.50
1:D:11:GLY:HA3	1:D:48:LYS:HG3	1.94	0.50
1:B:84:GLY:HA3	1:B:141:TRP:CD1	2.47	0.49
1:B:145:GLN:O	1:B:148:MET:HG2	2.13	0.49
1:D:49:VAL:HG11	1:D:194:ALA:HB1	1.93	0.49
1:D:122:ALA:HB1	1:D:126:ALA:HB3	1.93	0.49
1:B:201:SER:O	1:B:205:VAL:HG23	2.12	0.49
1:D:43:HIS:CE1	1:D:50:ILE:HD11	2.46	0.49
1:D:220:LEU:HB3	1:F:217:ASN:HD21	1.76	0.49
1:D:111:CYS:O	1:D:115:MET:HG3	2.12	0.49
1:A:61:SER:HB3	1:A:110:GLY:HA3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:12:ILE:HD11	1:E:49:VAL:HB	1.95	0.49
1:B:203:MET:HE3	1:B:237:HIS:HB2	1.95	0.49
1:A:7:SER:OG	1:A:12:ILE:HD12	2.12	0.49
1:B:29:ASP:HA	1:B:32:LYS:HE2	1.95	0.49
1:D:84:GLY:HA3	1:D:141:TRP:CG	2.48	0.49
1:C:84:GLY:HA3	1:C:141:TRP:CE2	2.48	0.49
1:D:181:VAL:HG21	1:D:189:GLU:CG	2.41	0.49
1:E:83:THR:O	1:E:87:VAL:HG12	2.12	0.49
1:B:145:GLN:HE22	1:E:215:GLY:HA3	1.78	0.49
1:C:96:GLN:O	1:C:209:LYS:NZ	2.46	0.49
1:D:15:VAL:HG12	1:D:52:LEU:HD13	1.94	0.49
1:A:145:GLN:HB2	2:A:304:HOH:O	2.13	0.48
1:D:235:PHE:CZ	1:F:70:SER:HB2	2.47	0.48
1:D:84:GLY:HA3	1:D:141:TRP:CD2	2.48	0.48
1:F:57:GLU:HA	1:F:103:ASN:HD22	1.77	0.48
1:F:146:ARG:O	1:F:150:ILE:HG13	2.13	0.48
1:C:12:ILE:HD11	1:C:51:ILE:HG13	1.95	0.48
1:C:237:HIS:O	1:C:240:ARG:HG2	2.13	0.48
1:D:117:CYS:O	1:D:120:ARG:NH1	2.29	0.48
1:B:73:SER:N	1:B:76:GLU:OE1	2.46	0.48
1:D:232:ARG:HG3	1:F:78:VAL:HG23	1.95	0.48
1:F:73:SER:O	1:F:76[B]:GLU:N	2.44	0.48
1:A:107:LEU:HD11	1:A:165:MET:HG3	1.95	0.48
1:C:119:ILE:HD11	1:E:158:GLU:HA	1.96	0.48
1:F:169:GLU:OE1	1:F:169:GLU:N	2.47	0.48
1:A:148:MET:HG3	1:A:153:ILE:HA	1.96	0.48
1:B:61:SER:O	1:B:106:ALA:HA	2.13	0.48
1:B:72:ILE:N	1:E:240:ARG:HH22	2.10	0.48
1:B:148:MET:HE2	1:E:212:ILE:HG23	1.95	0.48
1:D:53:THR:OG1	1:D:54:GLY:N	2.47	0.48
1:D:60:PHE:HB3	1:D:106:ALA:HB2	1.95	0.48
1:D:7:SER:OG	1:D:11:GLY:N	2.43	0.48
1:E:47:VAL:C	1:E:48:LYS:HD2	2.34	0.48
1:F:121:ILE:HG12	1:F:179:HIS:HB2	1.95	0.47
1:B:42:ASN:N	1:D:79:GLU:OE2	2.46	0.47
1:B:207:MET:HB3	1:B:230:ALA:HB1	1.96	0.47
1:C:202:THR:O	1:C:206:GLN:HG2	2.13	0.47
1:B:30:VAL:O	1:B:34:LEU:HD12	2.14	0.47
1:C:41:LEU:CD2	1:C:93:LEU:HB2	2.44	0.47
1:E:233:ASN:O	1:E:236:THR:OG1	2.33	0.47
1:F:19:ARG:HH12	1:F:25:ALA:HB3	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:9:SER:OG	1:B:9:SER:O	2.28	0.47
1:B:112:GLU:OE2	1:B:139:PRO:HB3	2.14	0.47
1:E:19:ARG:NH2	1:E:25:ALA:HB3	2.29	0.47
1:A:15:VAL:HG13	1:A:52:LEU:HD13	1.96	0.47
1:A:53:THR:HB	1:A:101:ALA:HB3	1.96	0.47
1:A:57:GLU:HG3	1:A:183:LEU:HD11	1.95	0.47
1:B:77:SER:HB2	1:E:231:TRP:HE1	1.80	0.47
1:B:215:GLY:HA3	1:C:145:GLN:HE22	1.78	0.47
1:D:7:SER:HG	1:D:12:ILE:H	1.63	0.47
1:D:35:ILE:HG23	1:D:90:THR:HG21	1.96	0.47
1:F:171:ALA:O	1:F:176:LEU:N	2.48	0.47
1:C:12:ILE:CD1	1:C:194:ALA:HB1	2.44	0.47
1:C:36:LYS:HD3	1:C:36:LYS:HA	1.82	0.47
1:D:31:ALA:O	1:D:35:ILE:HG13	2.15	0.47
1:D:201:SER:O	1:D:205:VAL:HG22	2.14	0.47
1:C:240:ARG:NH2	1:E:70:SER:O	2.47	0.46
1:A:52:LEU:O	1:A:101:ALA:N	2.44	0.46
1:A:112:GLU:OE2	1:A:143:GLY:N	2.48	0.46
1:B:78:VAL:HA	1:E:228:ILE:HD11	1.98	0.46
1:C:63:GLY:O	2:C:302:HOH:O	2.20	0.46
1:F:167:LYS:HB3	1:F:169:GLU:OE1	2.15	0.46
1:D:53:THR:OG1	1:D:103:ASN:OD1	2.29	0.46
1:E:26[A]:MET:HE3	1:E:141:TRP:CZ3	2.48	0.46
1:E:42:ASN:OD1	1:E:43:HIS:N	2.41	0.46
1:E:39:GLU:OE1	1:E:43:HIS:ND1	2.49	0.46
1:B:144:THR:O	2:B:301:HOH:O	2.20	0.46
1:D:43:HIS:HB2	1:D:96:GLN:NE2	2.30	0.46
1:D:17:ILE:HG21	1:D:24:ASN:HB3	1.97	0.46
1:E:16:LYS:HG2	1:E:53:THR:HG23	1.98	0.46
1:F:40:GLU:OE2	1:F:40:GLU:N	2.49	0.46
1:B:31:ALA:O	1:B:35:ILE:HG13	2.16	0.46
1:A:157:LYS:HD3	1:F:118:ASP:HB3	1.98	0.45
1:F:139:PRO:HG2	1:F:144:THR:HG22	1.98	0.45
1:B:121:ILE:HD11	1:B:193:MET:HE3	1.96	0.45
1:B:187:GLN:O	1:B:191:LEU:HG	2.16	0.45
1:C:38:PHE:HA	1:C:43:HIS:HE1	1.81	0.45
1:B:34:LEU:HB3	1:B:38:PHE:HE2	1.81	0.45
1:B:121:ILE:HD11	1:B:193:MET:CE	2.46	0.45
1:C:103:ASN:OD1	1:C:103:ASN:N	2.46	0.45
1:E:97:PRO:HA	1:E:118:ASP:OD2	2.16	0.45
1:E:81:ALA:O	1:E:85:GLN:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:235:PHE:CE2	1:D:77:SER:CB	2.96	0.45
1:D:235:PHE:HZ	1:F:70:SER:HB2	1.81	0.45
1:C:31:ALA:HB1	1:C:87:VAL:HG21	1.98	0.45
1:D:48:LYS:HD3	1:D:202:THR:HG22	1.99	0.45
1:F:50:ILE:HB	1:F:98:THR:HG22	1.98	0.45
1:F:120:ARG:HH11	1:F:120:ARG:HB2	1.82	0.45
1:A:135:ILE:HG13	1:A:137:VAL:HG22	1.99	0.45
1:A:149:ARG:NH2	2:A:301:HOH:O	2.46	0.45
1:B:138:PRO:HD3	1:E:234:CYS:SG	2.57	0.45
1:C:237:HIS:CG	1:C:238:PRO:HD2	2.51	0.45
1:E:12:ILE:HD11	1:E:194:ALA:HB1	1.98	0.45
1:E:24:ASN:N	1:E:24:ASN:OD1	2.50	0.45
1:E:54:GLY:O	1:E:103:ASN:ND2	2.40	0.45
1:D:218:ALA:HB2	1:E:222:THR:HG21	1.98	0.44
1:E:84:GLY:HA3	1:E:141:TRP:CE2	2.52	0.44
1:A:229:LEU:HB3	1:B:229:LEU:HB3	2.00	0.44
1:A:235:PHE:HE1	1:A:240:ARG:HG3	1.82	0.44
1:B:71:LYS:O	1:B:71:LYS:HG2	2.17	0.44
1:E:146:ARG:O	1:E:150:ILE:HD12	2.18	0.44
1:A:130:GLN:NE2	1:A:132:GLU:OE2	2.50	0.44
1:F:230:ALA:HA	1:F:233:ASN:HB2	1.99	0.44
1:B:5:THR:O	1:B:5:THR:OG1	2.33	0.44
1:D:125:THR:O	1:D:127:LYS:HG3	2.17	0.44
1:B:145:GLN:NE2	1:E:215:GLY:HA3	2.33	0.44
1:C:22:LYS:HG3	1:C:66:ILE:HG21	2.00	0.44
1:F:48:LYS:HD2	1:F:198:ALA:HB1	2.00	0.44
1:A:49:VAL:HG23	1:A:97:PRO:HB2	2.00	0.44
1:F:157:LYS:NZ	1:F:161:TYR:OH	2.47	0.44
1:B:7:SER:CB	1:B:11:GLY:H	2.30	0.44
1:C:235:PHE:CE1	1:E:137:VAL:HG11	2.53	0.44
1:D:220:LEU:HD22	1:F:216:ARG:NH2	2.33	0.44
1:E:191:LEU:HD23	1:E:191:LEU:HA	1.86	0.44
1:F:26:MET:HG2	1:F:141:TRP:CZ3	2.53	0.44
1:A:104:GLY:HA2	1:A:125:THR:O	2.18	0.44
1:B:8:THR:O	1:B:8:THR:OG1	2.36	0.44
1:C:211:ALA:HB1	2:E:302:HOH:O	2.18	0.44
1:D:78:VAL:O	1:D:82:LYS:HG3	2.17	0.44
1:D:124:ASP:OD1	1:D:182:PRO:HA	2.18	0.44
1:E:11:GLY:HA3	1:E:48:LYS:HG2	1.99	0.44
1:F:73:SER:O	1:F:76[A]:GLU:N	2.45	0.44
1:F:202:THR:O	1:F:206:GLN:HG3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:235:PHE:HA	1:D:240:ARG:HG2	1.99	0.43
1:F:120:ARG:NH1	1:F:176:LEU:O	2.51	0.43
1:D:27:ASN:H	1:D:30:VAL:HG22	1.83	0.43
1:D:170:GLU:O	1:D:174:ILE:HG12	2.18	0.43
1:E:5:THR:HG22	1:E:13:CYS:HB2	2.00	0.43
1:B:43:HIS:HD2	1:B:96:GLN:NE2	2.13	0.43
1:C:206:GLN:HG2	1:C:206:GLN:H	1.56	0.43
1:D:39:GLU:OE1	1:D:43:HIS:ND1	2.51	0.43
1:D:42:ASN:OD1	1:D:43:HIS:N	2.40	0.43
1:D:127:LYS:HE2	1:D:165:MET:CE	2.49	0.43
1:E:39:GLU:HB2	1:E:42:ASN:O	2.18	0.43
1:B:214:LYS:HD3	1:B:214:LYS:HA	1.67	0.43
1:C:158:GLU:OE2	1:C:164:LYS:NZ	2.51	0.43
1:D:126:ALA:O	1:D:168:ALA:HB2	2.18	0.43
1:C:59:ALA:HB1	1:C:105:PHE:HB2	2.01	0.43
1:D:78:VAL:HG12	1:D:82:LYS:HE3	1.99	0.43
1:D:196:GLN:HG2	1:F:162:THR:HB	2.00	0.43
1:B:66:ILE:N	1:B:66:ILE:HD13	2.34	0.43
1:B:203:MET:HG3	1:B:234:CYS:SG	2.59	0.43
1:B:118:ASP:HB3	1:C:157:LYS:HD3	2.01	0.43
1:F:103:ASN:OD1	1:F:103:ASN:N	2.52	0.43
1:C:211:ALA:O	1:E:145:GLN:NE2	2.52	0.43
1:C:237:HIS:CD2	1:C:238:PRO:HD2	2.54	0.42
1:D:197:ILE:HG13	1:F:162:THR:HG22	2.00	0.42
1:F:38:PHE:HA	1:F:43:HIS:NE2	2.34	0.42
1:A:4:VAL:O	1:A:13:CYS:HA	2.18	0.42
1:A:240:ARG:HD2	1:A:244:MET:SD	2.58	0.42
1:E:26[B]:MET:H	1:E:26[B]:MET:HG3	1.42	0.42
1:B:22:LYS:CG	1:B:66:ILE:HD12	2.49	0.42
1:E:49:VAL:HG22	1:E:97:PRO:HG2	2.01	0.42
1:E:201:SER:O	1:E:205:VAL:HG23	2.19	0.42
1:B:11:GLY:HA2	1:B:46:ASP:O	2.19	0.42
1:B:42:ASN:HB3	1:D:79:GLU:HG3	2.01	0.42
1:D:108:GLY:O	1:D:112:GLU:N	2.35	0.42
1:D:231:TRP:HE1	1:F:77:SER:HG	1.61	0.42
1:F:144:THR:OG1	1:F:145:GLN:OE1	2.37	0.42
1:F:17:ILE:HD11	1:F:60:PHE:HE1	1.85	0.42
1:F:52:LEU:HG	1:F:60:PHE:CZ	2.55	0.42
1:C:5:THR:HA	1:C:12:ILE:O	2.19	0.42
1:E:0:HIS:O	1:E:18:ASN:N	2.49	0.42
1:B:80:TYR:CD1	1:B:80:TYR:N	2.86	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:61:SER:O	1:D:110:GLY:HA3	2.20	0.42
1:D:108:GLY:HA2	1:D:130:GLN:NE2	2.35	0.42
1:A:118:ASP:HB3	1:D:157:LYS:HD3	2.02	0.41
1:B:44:ASN:OD1	1:B:47:VAL:HG23	2.20	0.41
1:B:70:SER:O	1:E:241:GLN:HG2	2.20	0.41
1:D:34:LEU:O	1:D:38:PHE:HD2	2.03	0.41
1:F:19:ARG:N	1:F:20:PRO:HD3	2.34	0.41
1:D:212:ILE:HD11	1:F:160:VAL:HG21	2.01	0.41
1:E:155:LYS:HA	1:E:155:LYS:HD2	1.78	0.41
1:F:38:PHE:HB2	1:F:90:THR:HG22	2.02	0.41
1:F:48:LYS:HD3	1:F:202:THR:HG22	2.01	0.41
1:B:27:ASN:OD1	1:B:28:THR:N	2.54	0.41
1:C:49:VAL:HG13	1:C:97:PRO:HB2	2.01	0.41
1:D:203:MET:HB2	1:D:237:HIS:CD2	2.56	0.41
1:D:240:ARG:NH1	1:F:70:SER:O	2.53	0.41
1:E:84:GLY:HA2	1:E:87:VAL:HG12	2.03	0.41
1:E:147:LEU:O	1:E:151:VAL:HG22	2.20	0.41
1:F:60:PHE:CD2	1:F:102:VAL:HG23	2.52	0.41
1:F:167:LYS:HG2	1:F:168:ALA:H	1.85	0.41
1:B:72:ILE:HB	1:B:76:GLU:OE1	2.21	0.41
1:B:192:LYS:HD3	1:B:192:LYS:HA	1.88	0.41
1:D:220:LEU:HG	1:D:224:LEU:HD23	2.02	0.41
1:A:77:SER:HB3	1:F:235:PHE:CD2	2.56	0.41
1:A:235:PHE:CD1	1:A:240:ARG:HG3	2.55	0.41
1:C:3:LEU:HA	1:C:14:THR:O	2.20	0.41
1:E:1:MET:HE3	1:E:1:MET:HB3	1.85	0.41
1:A:235:PHE:C	1:A:237:HIS:H	2.24	0.41
1:B:76:GLU:HB3	1:B:80:TYR:CZ	2.55	0.41
1:F:122:ALA:HB2	1:F:177:VAL:HG11	2.02	0.41
1:A:72:ILE:HD12	1:A:76:GLU:HB3	2.03	0.41
1:A:243:ARG:HB2	1:D:135:ILE:O	2.20	0.41
1:B:216:ARG:HE	1:B:216:ARG:HB3	1.55	0.41
1:C:203:MET:O	1:C:207:MET:HB2	2.20	0.41
1:E:0:HIS:HB3	1:E:30:VAL:HG22	2.02	0.41
1:E:43:HIS:HB2	1:E:96:GLN:HE22	1.84	0.41
1:E:88:THR:O	1:E:92:GLU:HG2	2.20	0.41
1:F:41:LEU:HD23	1:F:90:THR:HA	2.03	0.41
1:F:237:HIS:CD2	1:F:238:PRO:HD2	2.56	0.41
1:B:8:THR:O	1:B:9:SER:HB3	2.21	0.40
1:B:35:ILE:HG13	1:B:35:ILE:H	1.68	0.40
1:B:65:ASP:C	1:B:66:ILE:HD13	2.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:154:ALA:HB2	1:E:120:ARG:HH22	1.86	0.40
1:C:231:TRP:CE3	1:E:140:GLY:HA3	2.57	0.40
1:D:91:VAL:O	1:D:94:VAL:HG12	2.21	0.40
1:A:7:SER:HG	1:A:12:ILE:HD12	1.87	0.40
1:F:193[A]:MET:HE3	1:F:193[A]:MET:HB3	1.90	0.40
1:B:148:MET:HB3	1:B:148:MET:HE3	1.78	0.40
1:C:170:GLU:HA	1:C:173:GLU:HB2	2.04	0.40
1:D:229:LEU:HB3	1:E:229:LEU:HB3	2.04	0.40
1:D:175:GLY:O	2:D:301:HOH:O	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	236/246 (96%)	226 (96%)	10 (4%)	0	100	100
1	B	238/246 (97%)	223 (94%)	15 (6%)	0	100	100
1	C	231/246 (94%)	225 (97%)	6 (3%)	0	100	100
1	D	238/246 (97%)	224 (94%)	14 (6%)	0	100	100
1	E	236/246 (96%)	219 (93%)	17 (7%)	0	100	100
1	F	243/246 (99%)	227 (93%)	16 (7%)	0	100	100
All	All	1422/1476 (96%)	1344 (94%)	78 (6%)	0	100	100

There are no Ramachandran outliers to report.

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	194/198 (98%)	176 (91%)	18 (9%)	7 20
1	B	194/198 (98%)	171 (88%)	23 (12%)	4 12
1	C	191/198 (96%)	175 (92%)	16 (8%)	9 24
1	D	194/198 (98%)	170 (88%)	24 (12%)	4 11
1	E	194/198 (98%)	172 (89%)	22 (11%)	4 14
1	F	197/198 (100%)	184 (93%)	13 (7%)	14 33
All	All	1164/1188 (98%)	1048 (90%)	116 (10%)	6 18

All (116) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	0	HIS
1	A	7	SER
1	A	19	ARG
1	A	28	THR
1	A	34	LEU
1	A	40	GLU
1	A	44	ASN
1	A	45	ASP
1	A	58	LYS
1	A	146	ARG
1	A	148	MET
1	A	155	LYS
1	A	167	LYS
1	A	176	LEU
1	A	183	LEU
1	A	232	ARG
1	A	235	PHE
1	A	240	ARG
1	B	0	HIS
1	B	2	SER
1	B	5	THR
1	B	8	THR
1	B	13	CYS
1	B	28	THR
1	B	34	LEU
1	B	43	HIS
1	B	58	LYS

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Mol	Chain	Res	Type
1	B	65	ASP
1	B	68	TYR
1	B	69	MET
1	B	72	ILE
1	B	73	SER
1	B	75	ASP
1	B	82	LYS
1	B	83	THR
1	B	94	VAL
1	B	130	GLN
1	B	149	ARG
1	B	180	VAL
1	B	203	MET
1	B	236	THR
1	C	19	ARG
1	C	42	ASN
1	C	43	HIS
1	C	45	ASP
1	C	58	LYS
1	C	66	ILE
1	C	68	TYR
1	C	70	SER
1	C	72	ILE
1	C	148	MET
1	C	173	GLU
1	C	187	GLN
1	C	193[A]	MET
1	C	193[B]	MET
1	C	206	GLN
1	C	232	ARG
1	D	1	MET
1	D	4	VAL
1	D	6	THR
1	D	28	THR
1	D	53	THR
1	D	65	ASP
1	D	71	LYS
1	D	72	ILE
1	D	73	SER
1	D	96	GLN
1	D	98	THR
1	D	116	SER

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Mol	Chain	Res	Type
1	D	118	ASP
1	D	124	ASP
1	D	125	THR
1	D	165	MET
1	D	167	LYS
1	D	169	GLU
1	D	172	LYS
1	D	191	LEU
1	D	192	LYS
1	D	201	SER
1	D	232	ARG
1	D	239	ASP
1	E	2	SER
1	E	10	ASP
1	E	13	CYS
1	E	24	ASN
1	E	26[A]	MET
1	E	26[B]	MET
1	E	28	THR
1	E	37	THR
1	E	46	ASP
1	E	69	MET
1	E	73	SER
1	E	77	SER
1	E	85	GLN
1	E	96	GLN
1	E	116	SER
1	E	120	ARG
1	E	181	VAL
1	E	191	LEU
1	E	192	LYS
1	E	201	SER
1	E	232	ARG
1	E	239	ASP
1	F	1	MET
1	F	19	ARG
1	F	43	HIS
1	F	60	PHE
1	F	65	ASP
1	F	75	ASP
1	F	80	TYR
1	F	82	LYS

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Mol	Chain	Res	Type
1	F	118	ASP
1	F	120	ARG
1	F	124	ASP
1	F	166	ILE
1	F	241	GLN

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (9) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	130	GLN
1	A	179	HIS
1	B	43	HIS
1	C	43	HIS
1	D	196	GLN
1	E	96	GLN
1	F	85	GLN
1	F	195	GLN
1	F	217	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

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	242/246 (98%)	2.46	147 (60%)	0	0	37, 50, 64, 76	0
1	B	242/246 (98%)	2.50	156 (64%)	0	0	37, 51, 70, 89	0
1	C	236/246 (95%)	2.14	108 (45%)	1	1	26, 46, 59, 70	1 (0%)
1	D	242/246 (98%)	2.44	143 (59%)	0	0	36, 49, 64, 87	0
1	E	241/246 (97%)	2.48	139 (57%)	0	0	26, 52, 67, 82	1 (0%)
1	F	243/246 (98%)	2.59	151 (62%)	0	0	28, 51, 65, 80	2 (0%)
All	All	1446/1476 (97%)	2.44	844 (58%)	0	0	26, 50, 66, 89	4 (0%)

All (844) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	F	234	CYS	9.0
1	D	2	SER	9.0
1	F	76[A]	GLU	8.0
1	B	56	GLY	7.8
1	C	136	GLY	7.6
1	F	46	ASP	7.4
1	F	41	LEU	7.2
1	D	65	ASP	7.2
1	F	68	TYR	7.0
1	B	237	HIS	6.8
1	E	25	ALA	6.7
1	B	8	THR	6.7
1	D	202	THR	6.7
1	E	184	ALA	6.6
1	E	42	ASN	6.6
1	F	37	THR	6.6
1	A	139	PRO	6.3
1	B	17	ILE	6.3
1	F	64	ALA	6.2

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Mol	Chain	Res	Type	RSRZ
1	C	162	THR	6.1
1	E	18	ASN	6.1
1	C	239	ASP	6.1
1	B	19	ARG	6.0
1	F	110	GLY	6.0
1	A	25	ALA	6.0
1	A	65	ASP	5.9
1	E	68	TYR	5.9
1	A	140	GLY	5.9
1	A	70	SER	5.8
1	D	8	THR	5.7
1	A	7	SER	5.7
1	C	40	GLU	5.7
1	E	41	LEU	5.6
1	C	23	LEU	5.6
1	C	63	GLY	5.6
1	C	30	VAL	5.5
1	E	23	LEU	5.5
1	F	22	LYS	5.5
1	D	165	MET	5.5
1	B	69	MET	5.4
1	B	108	GLY	5.3
1	F	131	PRO	5.3
1	F	4	VAL	5.3
1	C	71	LYS	5.3
1	A	238	PRO	5.3
1	C	141	TRP	5.2
1	F	10	ASP	5.2
1	F	141	TRP	5.2
1	B	6	THR	5.2
1	D	214	LYS	5.2
1	C	105	PHE	5.2
1	C	172	LYS	5.2
1	D	109	GLY	5.2
1	F	7	SER	5.2
1	F	62	ALA	5.2
1	B	26	MET	5.1
1	F	72	ILE	5.1
1	A	63	GLY	5.1
1	F	3	LEU	5.1
1	A	21	ASP	5.1
1	E	235	PHE	5.1

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Mol	Chain	Res	Type	RSRZ
1	D	233	ASN	5.0
1	A	66	ILE	5.0
1	E	174	ILE	5.0
1	D	6	THR	5.0
1	E	20	PRO	5.0
1	B	18	ASN	5.0
1	B	68	TYR	5.0
1	A	138	PRO	5.0
1	E	183	LEU	4.9
1	F	2	SER	4.9
1	D	242	GLU	4.9
1	A	137	VAL	4.8
1	F	83	THR	4.8
1	E	74	ALA	4.8
1	D	104	GLY	4.8
1	D	125	THR	4.8
1	E	101	ALA	4.8
1	A	1	MET	4.7
1	E	186	LEU	4.7
1	A	241	GLN	4.7
1	D	129	GLY	4.7
1	A	136	GLY	4.7
1	D	71	LYS	4.7
1	D	40	GLU	4.6
1	B	70	SER	4.6
1	F	66	ILE	4.6
1	C	1	MET	4.6
1	E	236	THR	4.6
1	F	130	GLN	4.6
1	A	221	ASP	4.6
1	E	5	THR	4.6
1	A	64	ALA	4.6
1	E	10	ASP	4.5
1	D	11	GLY	4.5
1	D	63	GLY	4.5
1	F	161	TYR	4.5
1	E	97	PRO	4.5
1	D	59	ALA	4.5
1	B	72	ILE	4.5
1	F	63	GLY	4.4
1	E	14	THR	4.4
1	D	126	ALA	4.4

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Mol	Chain	Res	Type	RSRZ
1	A	12	ILE	4.4
1	E	72	ILE	4.4
1	B	63	GLY	4.4
1	B	136	GLY	4.4
1	D	238	PRO	4.4
1	E	38	PHE	4.4
1	E	66	ILE	4.4
1	B	39	GLU	4.4
1	B	67	GLU	4.4
1	F	57	GLU	4.4
1	C	78	VAL	4.3
1	E	6	THR	4.3
1	C	242	GLU	4.3
1	A	11	GLY	4.3
1	E	138	PRO	4.3
1	B	105	PHE	4.3
1	D	239	ASP	4.3
1	E	242	GLU	4.3
1	E	139	PRO	4.3
1	A	177	VAL	4.2
1	D	10	ASP	4.2
1	A	211	ALA	4.2
1	B	87	VAL	4.2
1	F	56	GLY	4.2
1	E	234	CYS	4.2
1	C	180	VAL	4.2
1	E	13	CYS	4.2
1	B	12	ILE	4.2
1	A	168	ALA	4.2
1	F	94	VAL	4.2
1	F	8	THR	4.2
1	C	15	VAL	4.2
1	C	18	ASN	4.1
1	B	191	LEU	4.1
1	F	45	ASP	4.1
1	C	37	THR	4.1
1	E	11	GLY	4.1
1	A	174	ILE	4.1
1	C	195	GLN	4.1
1	F	9	SER	4.1
1	D	220	LEU	4.1
1	C	72	ILE	4.1

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Mol	Chain	Res	Type	RSRZ
1	E	12	ILE	4.1
1	B	71	LYS	4.1
1	E	175	GLY	4.1
1	B	80	TYR	4.1
1	F	78	VAL	4.1
1	B	217	ASN	4.0
1	D	226	LEU	4.0
1	E	30	VAL	4.0
1	A	106	ALA	4.0
1	B	66	ILE	4.0
1	A	141	TRP	4.0
1	B	141	TRP	4.0
1	D	49	VAL	4.0
1	B	38	PHE	4.0
1	D	60	PHE	4.0
1	F	17	ILE	4.0
1	E	62	ALA	4.0
1	D	41	LEU	4.0
1	A	55	GLU	3.9
1	D	183	LEU	3.9
1	D	199	GLY	3.9
1	F	34	LEU	3.9
1	E	240	ARG	3.9
1	B	64	ALA	3.9
1	B	100	ALA	3.9
1	F	80	TYR	3.9
1	A	235	PHE	3.9
1	A	34	LEU	3.9
1	C	96	GLN	3.9
1	F	47	VAL	3.8
1	A	159	LEU	3.8
1	E	123	ALA	3.8
1	B	153	ILE	3.8
1	E	1	MET	3.8
1	F	187	GLN	3.8
1	E	4	VAL	3.8
1	A	191	LEU	3.8
1	A	79	GLU	3.8
1	E	64	ALA	3.8
1	E	71	LYS	3.8
1	E	95	LYS	3.8
1	B	74	ALA	3.8

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Mol	Chain	Res	Type	RSRZ
1	A	237	HIS	3.8
1	D	172	LYS	3.8
1	D	83	THR	3.8
1	F	28	THR	3.8
1	D	241	GLN	3.8
1	D	9	SER	3.8
1	B	22	LYS	3.7
1	E	40	GLU	3.7
1	F	67	GLU	3.7
1	D	150	ILE	3.7
1	D	96	GLN	3.7
1	D	234	CYS	3.7
1	A	188	GLU	3.7
1	F	27	ASN	3.7
1	C	14	THR	3.7
1	B	46	ASP	3.7
1	B	49	VAL	3.7
1	E	35	ILE	3.7
1	D	186	LEU	3.7
1	F	91	VAL	3.7
1	D	68	TYR	3.7
1	D	7	SER	3.7
1	E	37	THR	3.7
1	B	128	LEU	3.7
1	B	143	GLY	3.7
1	A	155	LYS	3.7
1	D	235	PHE	3.6
1	F	53	THR	3.6
1	A	107	LEU	3.6
1	D	84	GLY	3.6
1	D	177	VAL	3.6
1	E	228	ILE	3.6
1	B	44	ASN	3.6
1	F	109	GLY	3.6
1	E	207	MET	3.6
1	F	193[A]	MET	3.6
1	D	185	SER	3.6
1	D	204	GLY	3.6
1	A	233	ASN	3.6
1	E	231	TRP	3.6
1	F	123	ALA	3.6
1	A	234	CYS	3.6

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Mol	Chain	Res	Type	RSRZ
1	B	51	ILE	3.6
1	C	62	ALA	3.6
1	A	39	GLU	3.5
1	F	242	GLU	3.5
1	D	210	VAL	3.5
1	E	63	GLY	3.5
1	E	222	THR	3.5
1	B	50	ILE	3.5
1	E	150	ILE	3.5
1	B	187	GLN	3.5
1	C	122	ALA	3.5
1	F	59	ALA	3.5
1	B	60	PHE	3.5
1	B	138	PRO	3.5
1	A	80	TYR	3.5
1	F	43	HIS	3.5
1	F	90	THR	3.5
1	B	7	SER	3.5
1	B	195	GLN	3.5
1	A	190	ALA	3.5
1	F	159	LEU	3.5
1	D	137	VAL	3.5
1	A	125	THR	3.5
1	D	5	THR	3.5
1	E	121	ILE	3.5
1	F	119	ILE	3.5
1	B	126	ALA	3.5
1	E	86	LEU	3.5
1	E	229	LEU	3.5
1	A	0	HIS	3.5
1	B	161	TYR	3.5
1	D	56	GLY	3.5
1	F	11	GLY	3.5
1	A	35	ILE	3.5
1	D	127	LYS	3.5
1	D	164	LYS	3.5
1	A	13	CYS	3.5
1	D	153	ILE	3.4
1	A	6	THR	3.4
1	F	16	LYS	3.4
1	B	25	ALA	3.4
1	B	107	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
1	D	3	LEU	3.4
1	E	3	LEU	3.4
1	F	200	ASN	3.4
1	B	84	GLY	3.4
1	E	212	ILE	3.4
1	F	36	LYS	3.4
1	C	43	HIS	3.4
1	E	19	ARG	3.4
1	A	40	GLU	3.4
1	B	133	VAL	3.4
1	E	166	ILE	3.4
1	B	77	SER	3.4
1	C	66	ILE	3.4
1	D	4	VAL	3.4
1	D	33	GLU	3.4
1	B	104	GLY	3.4
1	B	210	VAL	3.4
1	E	214	LYS	3.4
1	C	114	ALA	3.3
1	B	130	GLN	3.3
1	C	70	SER	3.3
1	A	60	PHE	3.3
1	D	101	ALA	3.3
1	E	91	VAL	3.3
1	C	108	GLY	3.3
1	B	42	ASN	3.3
1	E	191	LEU	3.3
1	A	10	ASP	3.3
1	A	72	ILE	3.3
1	C	102	VAL	3.3
1	E	47	VAL	3.3
1	D	76	GLU	3.3
1	F	44	ASN	3.3
1	F	61	SER	3.3
1	F	20	PRO	3.3
1	F	181	VAL	3.3
1	A	123	ALA	3.2
1	F	31	ALA	3.2
1	A	28	THR	3.2
1	E	8	THR	3.2
1	C	133	VAL	3.2
1	C	160	VAL	3.2

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Mol	Chain	Res	Type	RSRZ
1	A	54	GLY	3.2
1	F	58	LYS	3.2
1	A	17	ILE	3.2
1	E	187	GLN	3.2
1	C	41	LEU	3.2
1	B	132	GLU	3.2
1	A	62	ALA	3.2
1	D	74	ALA	3.2
1	B	24	ASN	3.2
1	B	150	ILE	3.2
1	A	102	VAL	3.2
1	E	49	VAL	3.2
1	F	15	VAL	3.2
1	C	186	LEU	3.2
1	F	240	ARG	3.2
1	C	68	TYR	3.2
1	F	1	MET	3.2
1	B	4	VAL	3.2
1	C	140	GLY	3.2
1	D	138	PRO	3.2
1	F	135	ILE	3.1
1	B	181	VAL	3.1
1	C	103	ASN	3.1
1	F	102	VAL	3.1
1	F	160	VAL	3.1
1	A	53	THR	3.1
1	F	38	PHE	3.1
1	B	121	ILE	3.1
1	D	102	VAL	3.1
1	E	220	LEU	3.1
1	F	196	GLN	3.1
1	B	2	SER	3.1
1	F	5	THR	3.1
1	F	54	GLY	3.1
1	A	38	PHE	3.1
1	F	235	PHE	3.1
1	E	45	ASP	3.1
1	C	69	MET	3.1
1	F	50	ILE	3.1
1	F	186	LEU	3.1
1	D	47	VAL	3.1
1	D	80	TYR	3.1

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Mol	Chain	Res	Type	RSRZ
1	F	85	GLN	3.1
1	C	169	GLU	3.1
1	D	122	ALA	3.1
1	B	180	VAL	3.1
1	B	83	THR	3.1
1	F	6	THR	3.1
1	E	26[A]	MET	3.1
1	C	25	ALA	3.1
1	B	113	LEU	3.0
1	A	78	VAL	3.0
1	E	94	VAL	3.0
1	A	172	LYS	3.0
1	E	44	ASN	3.0
1	D	240	ARG	3.0
1	F	195	GLN	3.0
1	A	182	PRO	3.0
1	B	212	ILE	3.0
1	A	113	LEU	3.0
1	F	128	LEU	3.0
1	D	16	LYS	3.0
1	E	143	GLY	3.0
1	F	14	THR	3.0
1	E	79	GLU	3.0
1	F	25	ALA	3.0
1	A	61	SER	3.0
1	E	46	ASP	3.0
1	A	26	MET	3.0
1	A	187	GLN	3.0
1	A	226	LEU	3.0
1	B	186	LEU	3.0
1	D	86	LEU	3.0
1	E	159	LEU	3.0
1	F	202	THR	3.0
1	C	42	ASN	3.0
1	D	24	ASN	3.0
1	C	95	LYS	3.0
1	F	81	ALA	3.0
1	B	9	SER	3.0
1	E	87	VAL	3.0
1	D	159	LEU	2.9
1	A	154	ALA	2.9
1	A	4	VAL	2.9

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Mol	Chain	Res	Type	RSRZ
1	A	210	VAL	2.9
1	B	102	VAL	2.9
1	F	0	HIS	2.9
1	E	147	LEU	2.9
1	F	107	LEU	2.9
1	A	134	THR	2.9
1	E	230	ALA	2.9
1	F	171	ALA	2.9
1	A	15	VAL	2.9
1	D	55	GLU	2.9
1	C	203	MET	2.9
1	E	29	ASP	2.9
1	E	51	ILE	2.9
1	A	245	THR	2.9
1	D	232	ARG	2.9
1	B	204	GLY	2.9
1	B	135	ILE	2.9
1	C	34	LEU	2.9
1	D	147	LEU	2.9
1	E	34	LEU	2.9
1	F	127	LYS	2.9
1	A	114	ALA	2.9
1	E	100	ALA	2.9
1	A	160	VAL	2.9
1	D	87	VAL	2.9
1	B	200	ASN	2.9
1	B	157	LYS	2.8
1	C	22	LYS	2.8
1	F	150	ILE	2.8
1	C	101	ALA	2.8
1	E	154	ALA	2.8
1	E	198	ALA	2.8
1	A	49	VAL	2.8
1	A	133	VAL	2.8
1	B	78	VAL	2.8
1	D	222	THR	2.8
1	F	42	ASN	2.8
1	A	48	LYS	2.8
1	D	48	LYS	2.8
1	D	141	TRP	2.8
1	A	93	LEU	2.8
1	B	225	GLY	2.8

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Mol	Chain	Res	Type	RSRZ
1	C	150	ILE	2.8
1	D	225	GLY	2.8
1	E	80	TYR	2.8
1	A	14	THR	2.8
1	C	112	GLU	2.8
1	D	67	GLU	2.8
1	F	125	THR	2.8
1	C	0	HIS	2.8
1	A	42	ASN	2.8
1	D	72	ILE	2.8
1	D	99	ILE	2.8
1	D	110	GLY	2.8
1	F	136	GLY	2.8
1	C	201	SER	2.8
1	F	96	GLN	2.8
1	B	165	MET	2.8
1	A	181	VAL	2.8
1	F	82	LYS	2.8
1	A	18	ASN	2.8
1	A	44	ASN	2.8
1	C	175	GLY	2.8
1	F	148	MET	2.8
1	D	64	ALA	2.8
1	D	181	VAL	2.8
1	B	239	ASP	2.8
1	C	46	ASP	2.8
1	B	134	THR	2.8
1	F	172	LYS	2.8
1	B	43	HIS	2.8
1	D	237	HIS	2.8
1	F	129	GLY	2.8
1	D	231	TRP	2.7
1	F	190	ALA	2.7
1	D	95	LYS	2.7
1	C	51	ILE	2.7
1	C	174	ILE	2.7
1	E	56	GLY	2.7
1	E	223	GLY	2.7
1	F	104	GLY	2.7
1	D	203	MET	2.7
1	E	210	VAL	2.7
1	B	164	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
1	E	48	LYS	2.7
1	F	48	LYS	2.7
1	E	70	SER	2.7
1	B	52	LEU	2.7
1	C	170	GLU	2.7
1	A	51	ILE	2.7
1	C	17	ILE	2.7
1	C	238	PRO	2.7
1	D	1	MET	2.7
1	A	87	VAL	2.7
1	B	30	VAL	2.7
1	C	194	ALA	2.7
1	D	31	ALA	2.7
1	F	113	LEU	2.7
1	B	61	SER	2.7
1	F	99	ILE	2.7
1	F	197	ILE	2.7
1	B	144	THR	2.7
1	B	202	THR	2.7
1	B	156	ALA	2.7
1	F	137	VAL	2.7
1	A	145	GLN	2.7
1	D	23	LEU	2.7
1	F	183	LEU	2.7
1	A	105	PHE	2.7
1	C	35	ILE	2.7
1	D	135	ILE	2.7
1	A	33	GLU	2.7
1	C	61	SER	2.7
1	F	55	GLU	2.7
1	A	244	MET	2.7
1	B	10	ASP	2.7
1	D	221	ASP	2.7
1	B	139	PRO	2.7
1	C	56	GLY	2.7
1	C	154	ALA	2.6
1	C	184	ALA	2.6
1	E	89	ALA	2.6
1	F	18	ASN	2.6
1	B	176	LEU	2.6
1	E	224	LEU	2.6
1	E	226	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
1	F	86	LEU	2.6
1	E	188	GLU	2.6
1	A	143	GLY	2.6
1	E	180	VAL	2.6
1	B	106	ALA	2.6
1	C	106	ALA	2.6
1	D	106	ALA	2.6
1	A	195	GLN	2.6
1	A	196	GLN	2.6
1	B	196	GLN	2.6
1	F	52	LEU	2.6
1	F	145	GLN	2.6
1	D	0	HIS	2.6
1	A	142	GLY	2.6
1	B	155	LYS	2.6
1	B	13	CYS	2.6
1	C	128	LEU	2.6
1	E	27	ASN	2.6
1	A	192	LYS	2.6
1	C	240	ARG	2.6
1	F	157	LYS	2.6
1	B	5	THR	2.6
1	C	21	ASP	2.6
1	E	137	VAL	2.6
1	F	106	ALA	2.6
1	D	212	ILE	2.6
1	F	26	MET	2.6
1	F	115	MET	2.6
1	A	131	PRO	2.6
1	A	132	GLU	2.6
1	C	192	LYS	2.6
1	D	58	LYS	2.6
1	F	169	GLU	2.6
1	D	180	VAL	2.6
1	B	65	ASP	2.6
1	B	159	LEU	2.6
1	D	52	LEU	2.6
1	F	219	ASP	2.6
1	A	150	ILE	2.5
1	A	130	GLN	2.5
1	B	231	TRP	2.5
1	B	27	ASN	2.5

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Mol	Chain	Res	Type	RSRZ
1	C	178	ASN	2.5
1	D	44	ASN	2.5
1	B	40	GLU	2.5
1	D	236	THR	2.5
1	E	177	VAL	2.5
1	A	186	LEU	2.5
1	C	191	LEU	2.5
1	A	2	SER	2.5
1	A	156	ALA	2.5
1	A	201	SER	2.5
1	D	81	ALA	2.5
1	F	74	ALA	2.5
1	A	239	ASP	2.5
1	B	124	ASP	2.5
1	C	197	ILE	2.5
1	C	139	PRO	2.5
1	B	86	LEU	2.5
1	E	15	VAL	2.5
1	A	73	SER	2.5
1	D	35	ILE	2.5
1	C	16	LYS	2.5
1	C	231	TRP	2.5
1	C	138	PRO	2.5
1	A	3	LEU	2.5
1	B	91	VAL	2.5
1	D	78	VAL	2.5
1	D	160	VAL	2.5
1	E	102	VAL	2.5
1	F	220	LEU	2.5
1	F	98	THR	2.5
1	B	101	ALA	2.5
1	E	211	ALA	2.5
1	B	99	ILE	2.5
1	B	58	LYS	2.5
1	D	70	SER	2.5
1	E	124	ASP	2.5
1	D	196	GLN	2.5
1	A	120	ARG	2.5
1	A	179	HIS	2.5
1	C	163	GLY	2.5
1	D	43	HIS	2.5
1	F	176	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
1	A	230	ALA	2.5
1	B	62	ALA	2.5
1	D	28	THR	2.5
1	E	218	ALA	2.5
1	F	122	ALA	2.5
1	A	16	LYS	2.4
1	B	127	LYS	2.4
1	A	43	HIS	2.4
1	D	54	GLY	2.4
1	D	229	LEU	2.4
1	A	171	ALA	2.4
1	A	184	ALA	2.4
1	C	211	ALA	2.4
1	A	167	LYS	2.4
1	E	58	LYS	2.4
1	E	120	ARG	2.4
1	B	118	ASP	2.4
1	B	183	LEU	2.4
1	B	224	LEU	2.4
1	B	226	LEU	2.4
1	A	173	GLU	2.4
1	D	151	VAL	2.4
1	E	69	MET	2.4
1	C	198	ALA	2.4
1	D	184	ALA	2.4
1	D	198	ALA	2.4
1	E	168	ALA	2.4
1	B	14	THR	2.4
1	A	86	LEU	2.4
1	C	93	LEU	2.4
1	B	152	GLY	2.4
1	C	104	GLY	2.4
1	D	79	GLU	2.4
1	A	119	ILE	2.4
1	B	35	ILE	2.4
1	D	22	LYS	2.4
1	F	71	LYS	2.4
1	D	154	ALA	2.4
1	F	126	ALA	2.4
1	A	236	THR	2.4
1	B	241	GLN	2.4
1	A	41	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
1	A	77	SER	2.4
1	E	75	ASP	2.4
1	E	104	GLY	2.4
1	F	73	SER	2.4
1	C	79	GLU	2.4
1	E	32	LYS	2.4
1	A	59	ALA	2.4
1	F	211	ALA	2.4
1	B	117	CYS	2.4
1	B	147	LEU	2.3
1	A	207	MET	2.3
1	D	148	MET	2.3
1	A	223	GLY	2.3
1	B	185	SER	2.3
1	D	155	LYS	2.3
1	F	21	ASP	2.3
1	D	12	ILE	2.3
1	F	212	ILE	2.3
1	B	211	ALA	2.3
1	C	235	PHE	2.3
1	F	19	ARG	2.3
1	A	111	CYS	2.3
1	A	203	MET	2.3
1	C	113	LEU	2.3
1	B	0	HIS	2.3
1	F	180	VAL	2.3
1	D	50	ILE	2.3
1	A	189	GLU	2.3
1	B	201	SER	2.3
1	E	76	GLU	2.3
1	E	219	ASP	2.3
1	F	65	ASP	2.3
1	D	100	ALA	2.3
1	B	162	THR	2.3
1	A	220	LEU	2.3
1	F	233	ASN	2.3
1	C	161	TYR	2.3
1	C	187	GLN	2.3
1	D	108	GLY	2.3
1	E	43	HIS	2.3
1	E	197	ILE	2.3
1	F	153	ILE	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	158	GLU	2.3
1	C	39	GLU	2.3
1	A	124	ASP	2.3
1	D	93	LEU	2.3
1	F	191	LEU	2.3
1	F	144	THR	2.3
1	E	96	GLN	2.3
1	A	151	VAL	2.3
1	D	136	GLY	2.3
1	F	84	GLY	2.3
1	D	197	ILE	2.3
1	F	166	ILE	2.3
1	A	227	GLU	2.3
1	F	105	PHE	2.3
1	D	62	ALA	2.3
1	E	122	ALA	2.3
1	A	165	MET	2.3
1	C	148	MET	2.3
1	D	191	LEU	2.3
1	B	36	LYS	2.3
1	B	82	LYS	2.3
1	F	88	THR	2.3
1	F	97	PRO	2.3
1	F	192	LYS	2.3
1	B	215	GLY	2.2
1	B	223	GLY	2.2
1	C	4	VAL	2.2
1	E	195	GLN	2.2
1	F	140	GLY	2.2
1	B	123	ALA	2.2
1	E	92	GLU	2.2
1	D	75	ASP	2.2
1	E	193	MET	2.2
1	C	86	LEU	2.2
1	A	5	THR	2.2
1	A	37	THR	2.2
1	B	110	GLY	2.2
1	B	177	VAL	2.2
1	C	12	ILE	2.2
1	C	212	ILE	2.2
1	E	140	GLY	2.2
1	E	206	GLN	2.2

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Mol	Chain	Res	Type	RSRZ
1	A	67	GLU	2.2
1	A	100	ALA	2.2
1	B	168	ALA	2.2
1	D	189	GLU	2.2
1	C	193[A]	MET	2.2
1	A	229	LEU	2.2
1	B	3	LEU	2.2
1	C	219	ASP	2.2
1	D	32	LYS	2.2
1	E	88	THR	2.2
1	E	90	THR	2.2
1	B	205	VAL	2.2
1	A	126	ALA	2.2
1	F	198	ALA	2.2
1	C	33	GLU	2.2
1	D	57	GLU	2.2
1	B	229	LEU	2.2
1	E	176	LEU	2.2
1	B	214	LYS	2.2
1	C	118	ASP	2.2
1	A	116	SER	2.2
1	A	185	SER	2.2
1	A	135	ILE	2.2
1	F	35	ILE	2.2
1	F	121	ILE	2.2
1	C	129	GLY	2.2
1	E	109	GLY	2.2
1	E	237	HIS	2.2
1	A	193	MET	2.2
1	B	122	ALA	2.2
1	C	31	ALA	2.2
1	C	59	ALA	2.2
1	D	25	ALA	2.2
1	F	154	ALA	2.2
1	D	111	CYS	2.2
1	D	113	LEU	2.2
1	F	95	LYS	2.2
1	F	155	LYS	2.2
1	B	75	ASP	2.2
1	F	118	ASP	2.2
1	B	174	ILE	2.2
1	E	17	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
1	E	116	SER	2.2
1	F	51	ILE	2.2
1	B	88	THR	2.1
1	C	142	GLY	2.1
1	C	143	GLY	2.1
1	E	83	THR	2.1
1	E	162	THR	2.1
1	E	146	ARG	2.1
1	D	42	ASN	2.1
1	C	226	LEU	2.1
1	C	67	GLU	2.1
1	B	37	THR	2.1
1	B	98	THR	2.1
1	B	129	GLY	2.1
1	C	215	GLY	2.1
1	C	60	PHE	2.1
1	B	220	LEU	2.1
1	F	231	TRP	2.1
1	A	109	GLY	2.1
1	C	19	ARG	2.1
1	D	19	ARG	2.1
1	D	21	ASP	2.1
1	D	143	GLY	2.1
1	A	208	SER	2.1
1	B	208	SER	2.1
1	B	222	THR	2.1
1	D	167	LYS	2.1
1	E	85	GLN	2.1
1	B	114	ALA	2.1
1	A	92	GLU	2.1
1	B	15	VAL	2.1
1	B	163	GLY	2.1
1	D	216	ARG	2.1
1	B	48	LYS	2.1
1	A	162	THR	2.1
1	F	222	THR	2.1
1	F	239	ASP	2.1
1	E	190	ALA	2.1
1	D	161	TYR	2.1
1	A	112	GLU	2.1
1	B	57	GLU	2.1
1	D	17	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
1	E	151	VAL	2.1
1	E	204	GLY	2.1
1	F	23	LEU	2.0
1	B	90	THR	2.0
1	D	144	THR	2.0
1	E	241	GLN	2.0
1	E	194	ALA	2.0
1	B	55	GLU	2.0
1	F	40	GLU	2.0
1	A	19	ARG	2.0
1	E	78	VAL	2.0
1	B	95	LYS	2.0
1	B	172	LYS	2.0
1	E	16	LYS	2.0
1	A	52	LEU	2.0
1	E	52	LEU	2.0
1	C	2	SER	2.0
1	A	57	GLU	2.0
1	B	92	GLU	2.0
1	B	238	PRO	2.0
1	D	20	PRO	2.0
1	E	33	GLU	2.0
1	F	138	PRO	2.0
1	C	115	MET	2.0
1	C	94	VAL	2.0
1	D	34	LEU	2.0
1	E	93	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)

There are no ligands in this entry.

6.5 Other polymers (i)

There are no such residues in this entry.