



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 5, 2026 – 12:59 AM UTC

PDB ID : 9ULA / pdb_00009ula
Title : Cryogenic temperature crystal structure of Nmar_1308 protein at 2.96 angstrom resolution
Authors : Destan, E.; DeMirici, 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	:	4-5-2 with Phenix2.0
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

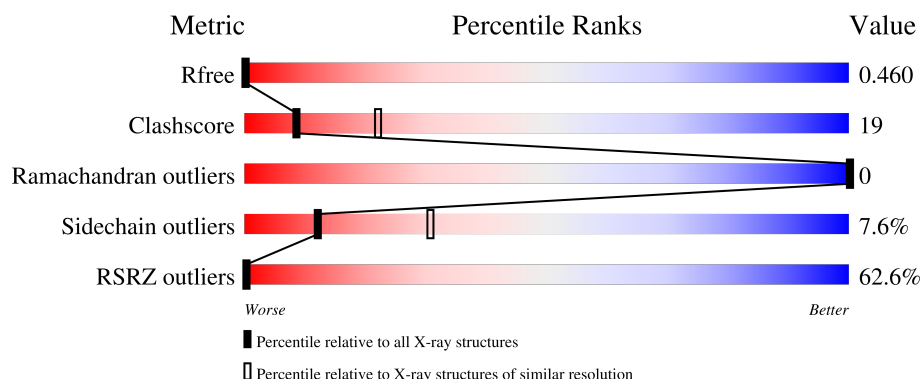
1 Overall quality at a glance

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}	180053	1130 (2.98-2.94)
Clashscore	190562	1157 (2.98-2.94)
Ramachandran outliers	187476	1101 (2.98-2.94)
Sidechain outliers	187428	1101 (2.98-2.94)
RSRZ outliers	180081	1130 (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 $\leq 5\%$. 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	<div> <div>65%</div> <div>65% 32% ..</div> </div>
1	B	246	<div> <div>69%</div> <div>58% 36% ..</div> </div>
1	C	246	<div> <div>47%</div> <div>58% 35% ..</div> </div>
1	D	246	<div> <div>60%</div> <div>53% 42% ..</div> </div>
1	E	246	<div> <div>61%</div> <div>58% 35% 5% ..</div> </div>

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Mol	Chain	Length	Quality of chain
1	F	246	<div><div><div></div><div></div><div></div></div><div>65%</div><div>59%</div><div>37%</div><div>..</div></div>

2 Entry composition

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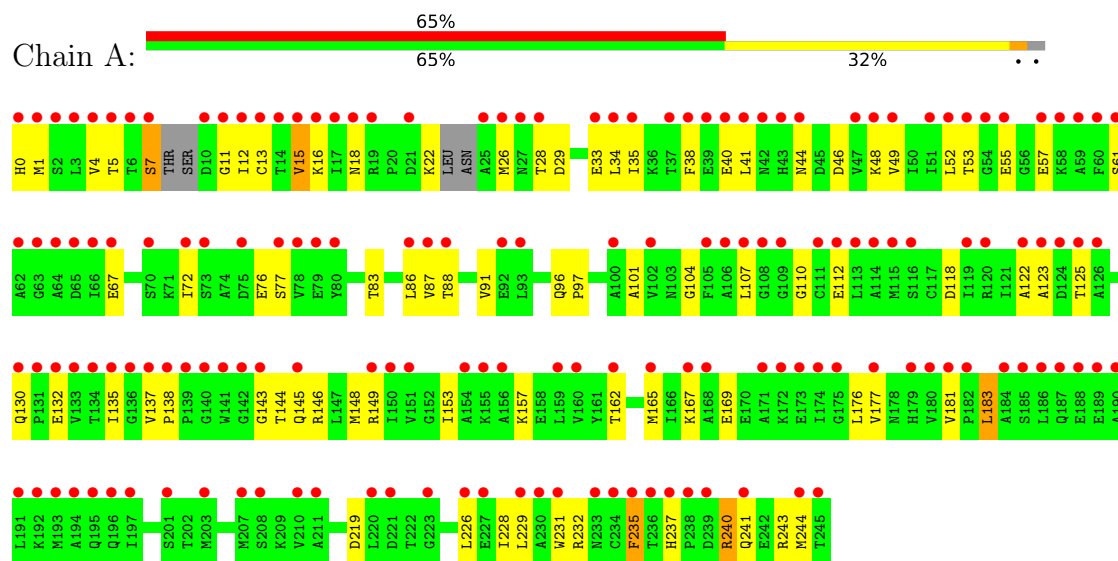
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
2	D	5	Total 5	O 5	0	0
2	E	10	Total 10	O 10	0	0
2	F	8	Total 8	O 8	0	0

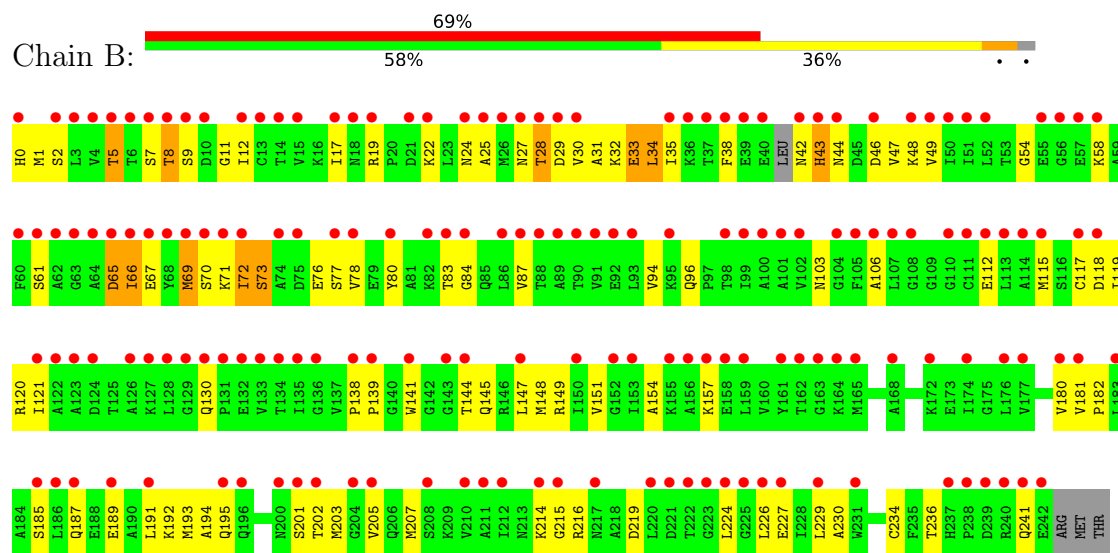
3 Residue-property plots

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

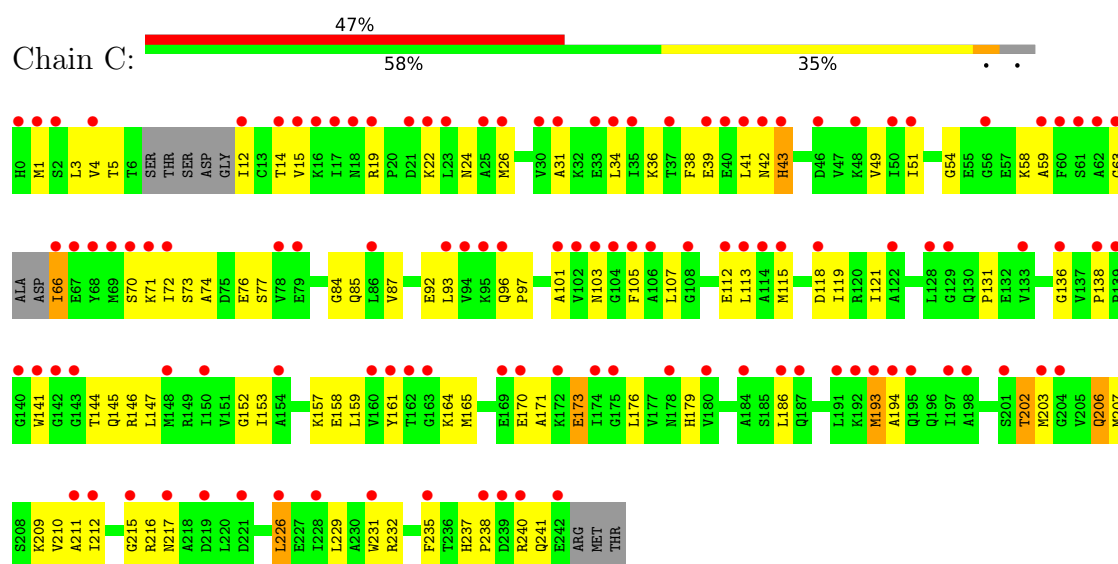
• Molecule 1: Enoyl-CoA hydratase/isomerase



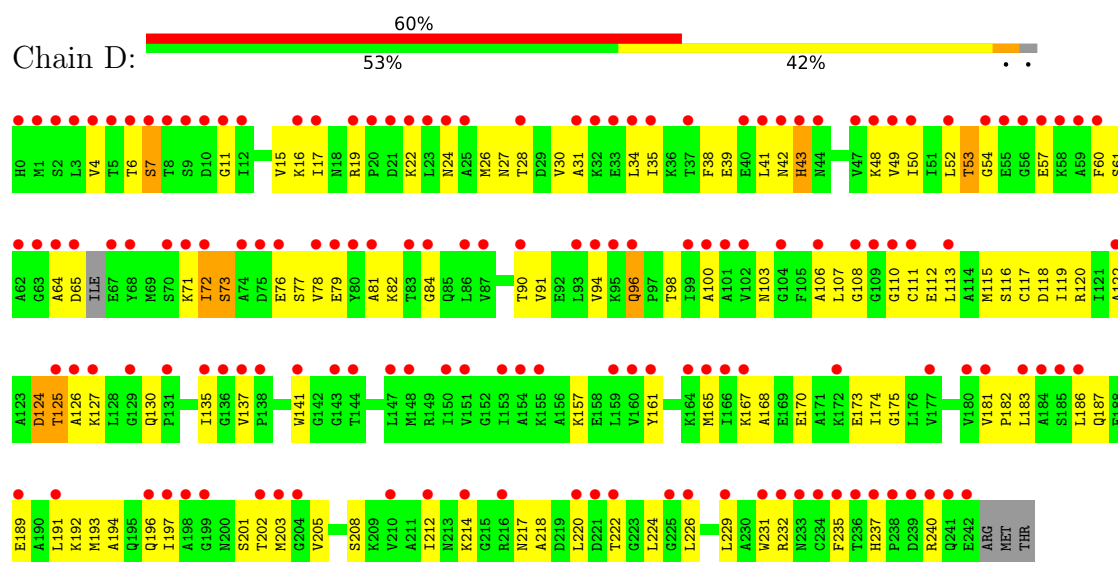
• Molecule 1: Enoyl-CoA hydratase/isomerase



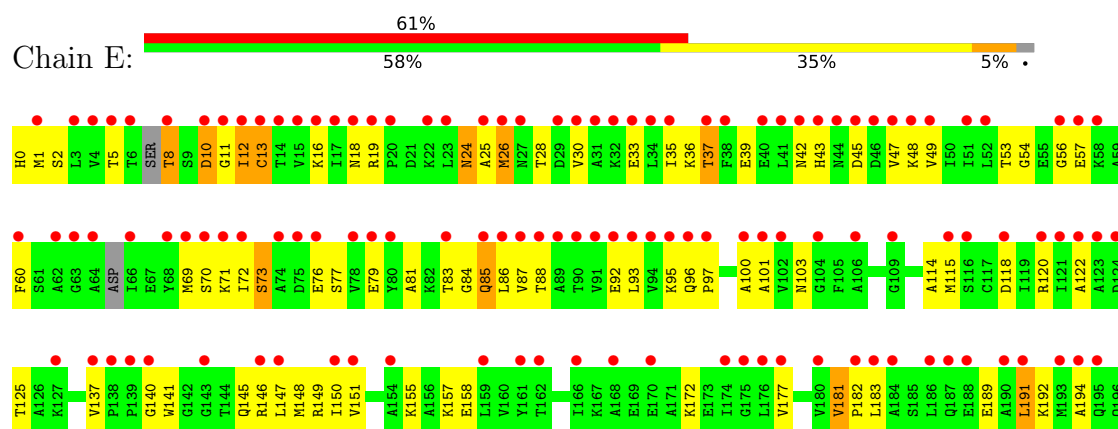
• Molecule 1: Enoyl-CoA hydratase/isomerase

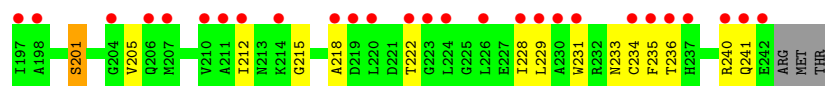


• Molecule 1: Enoyl-CoA hydratase/isomerase

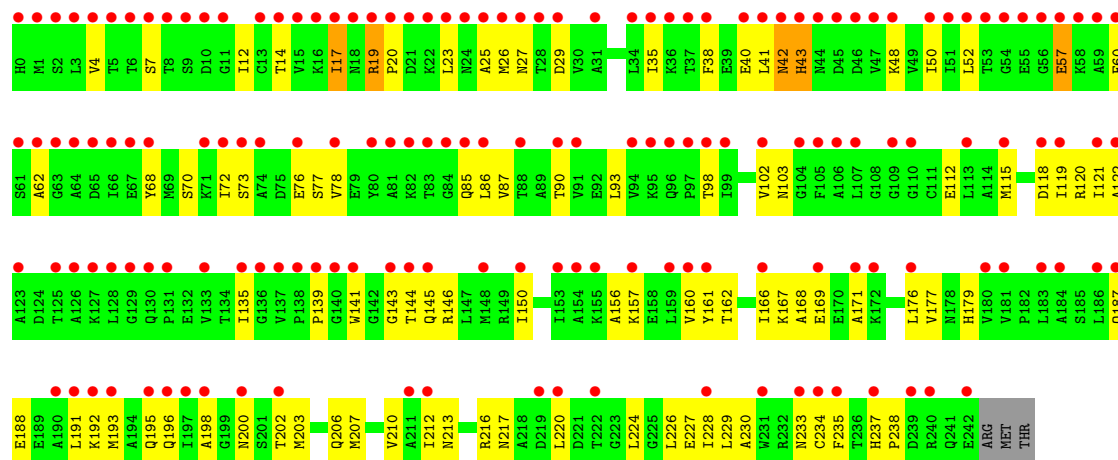


• Molecule 1: Enoyl-CoA hydratase/isomerase





● Molecule 1: Enoyl-CoA hydratase/isomerase



4 Data and refinement statistics

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
$\langle I/\sigma(I) \rangle$ ¹	1.55 (at 2.96Å)	Xtriage
Refinement program	PHENIX (1.19.2_4158: ???)	Depositor
R, R_{free}	0.442 , 0.461 0.443 , 0.460	Depositor DCC
R_{free} test set	2005 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	$\langle L \rangle = 0.49$, $\langle L^2 \rangle = 0.32$	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.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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	0.16	0/1831	0.35	0/2468
1	B	0.18	0/1827	0.41	1/2466 (0.0%)
1	C	0.16	0/1798	0.34	0/2424
1	D	0.20	0/1827	0.43	0/2466
1	E	0.21	0/1828	0.41	0/2465
1	F	0.19	0/1853	0.35	0/2502
All	All	0.18	0/10964	0.38	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(°)	Ideal(°)
1	B	69	MET	CB-CG-SD	5.73	129.88	112.70

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 ⓘ

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	64	0
1	B	1807	0	1842	91	0
1	C	1779	0	1827	71	0
1	D	1807	0	1842	95	0
1	E	1809	0	1851	83	0
1	F	1832	0	1867	81	0
2	A	8	0	0	2	0
2	B	7	0	0	1	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	414	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 19.

All (414) 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: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:C:1:MET:HE1	1:C:15:VAL:HG13	1.71	0.73
1:B:112:GLU:HA	1:B:115:MET:HE2	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: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
1:A:22:LYS:NZ	1:A:67:GLU:OE1	2.26	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:E:115:MET:HE3	1:E:150:ILE:HD13	1.74	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: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:1:MET:HE1	1:A:33:GLU:HB3	1.75	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:F:203:MET:HE1	1:F:237:HIS:HB3	1.78	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:C:119:ILE:HG21	1:C:193[A]:MET:HE1	1.78	0.64
1:F:193[B]:MET:SD	1:F:196:GLN:NE2	2.71	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:B:148:MET:HE1	1:E:212:ILE:HA	1.81	0.62
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:E:26[A]:MET:HE3	1:E:141:TRP:HZ3	1.64	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:F:207:MET:HE2	1:F:207:MET:HA	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:A:232:ARG:NH2	1:B:203:MET:HE1	2.16	0.61
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:F:119:ILE:HG21	1:F:193[A]:MET:HE1	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:F:112:GLU:HA	1:F:115:MET:HE2	1.84	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:C:112:GLU:HA	1:C:115:MET:HE2	1.85	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: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:C:26:MET:HE1	1:C:113:LEU:HD22	1.87	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:118:ASP:HB3	1:F:157:LYS:HD3	1.87	0.56
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
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:D:127:LYS:HE2	1:D:165:MET:HE2	1.90	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:144:THR:O	1:B:148:MET:HE3	2.09	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:C:107:LEU:HG	1:C:165:MET:HE2	1.91	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:47:VAL:C	1:E:48:LYS:HD2	2.34	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:E:181:VAL:HG12	1:E:182:PRO:HD2	1.91	0.51
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:84:GLY:HA3	1:B:141:TRP:CD1	2.47	0.49
1:F:70:SER:O	1:F:70:SER:OG	2.28	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
1:E:12:ILE:HD11	1:E:49:VAL:HB	1.95	0.49
1:A:1:MET:HE3	1:A:1:MET:HB2	1.39	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:B:227:GLU:OE1	1:C:144:THR:OG1	2.27	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:B:1:MET:HE1	1:B:33:GLU:HB3	1.95	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:A:144:THR:OG1	1:F:227:GLU:OE1	2.27	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:E:1:MET:HE3	1:E:33:GLU:HB3	1.94	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:72:ILE:N	1:E:240:ARG:HH22	2.10	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: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
1:B:9:SER:O	1:B:9:SER:OG	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: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: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:D:26:MET:HE1	1:D:34:LEU:HD12	1.97	0.46
1:E:16:LYS:HG2	1:E:53:THR:HG23	1.98	0.46
1:E:26[A]:MET:HE3	1:E:141:TRP:CZ3	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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:A:235:PHE:C	1:A:237:HIS:H	2.24	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:B:65:ASP:C	1:B:66:ILE:HD13	2.41	0.45
1:E:81:ALA:O	1:E:85:GLN:HB2	2.16	0.45
1:A:235:PHE:CE2	1:D:77:SER:CB	2.96	0.45
1:E:115:MET:HE1	1:E:147:LEU:HA	1.99	0.45
1:C:74:ALA:O	1:C:77:SER:OG	2.32	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:A:232:ARG:HH22	1:B:203:MET:HE1	1.82	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:1:MET:HB2	1:C:1:MET:HE3	1.60	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:26:MET:HE3	1:D:113:LEU:HD22	1.99	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
1:C:92:GLU:CD	1:C:216:ARG:HH22	2.26	0.43
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:F:193[A]:MET:HE2	1:F:193[A]:MET:HB3	1.86	0.43
1:B:66:ILE:HD13	1:B:66:ILE:N	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:B:69:MET:O	1:B:69:MET:HE2	2.19	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:1:MET:SD	1:E:37:THR:OG1	2.69	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: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:F:27:ASN:OD1	1:F:27:ASN:C	2.62	0.42
1:B:80:TYR:CD1	1:B:80:TYR:N	2.86	0.42
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:B:1:MET:HE2	1:B:1:MET:HB2	1.94	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:203:MET:HB3	1:F:203:MET:HE2	1.74	0.41
1:A:26:MET:HE2	1:A:26:MET:HB2	1.90	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1:MET:CE	1:A:33:GLU:HB3	2.48	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: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:A:0:HIS:C	1:A:18:ASN:HB3	2.46	0.40
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: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: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

5.3.1 Protein backbone

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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 ⓘ

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%)	183 (94%)	11 (6%)	18	42
1	B	194/198 (98%)	176 (91%)	18 (9%)	8	23
1	C	191/198 (96%)	176 (92%)	15 (8%)	11	29
1	D	194/198 (98%)	176 (91%)	18 (9%)	8	23
1	E	194/198 (98%)	175 (90%)	19 (10%)	7	21
1	F	197/198 (100%)	188 (95%)	9 (5%)	24	50
All	All	1164/1188 (98%)	1074 (92%)	90 (8%)	12	30

All (90) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	7	SER
1	A	15	VAL
1	A	28	THR
1	A	34	LEU

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Mol	Chain	Res	Type
1	A	40	GLU
1	A	44	ASN
1	A	176	LEU
1	A	183	LEU
1	A	228	ILE
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	28	THR
1	B	33	GLU
1	B	34	LEU
1	B	43	HIS
1	B	58	LYS
1	B	65	ASP
1	B	66	ILE
1	B	72	ILE
1	B	73	SER
1	B	83	THR
1	B	94	VAL
1	B	130	GLN
1	B	180	VAL
1	B	236	THR
1	C	4	VAL
1	C	34	LEU
1	C	43	HIS
1	C	58	LYS
1	C	66	ILE
1	C	70	SER
1	C	72	ILE
1	C	146	ARG
1	C	159	LEU
1	C	173	GLU
1	C	193[A]	MET
1	C	193[B]	MET
1	C	202	THR
1	C	206	GLN
1	C	226	LEU
1	D	4	VAL
1	D	6	THR

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Mol	Chain	Res	Type
1	D	7	SER
1	D	28	THR
1	D	43	HIS
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
1	D	124	ASP
1	D	125	THR
1	D	167	LYS
1	D	191	LEU
1	D	192	LYS
1	E	2	SER
1	E	8	THR
1	E	10	ASP
1	E	12	ILE
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	69	MET
1	E	73	SER
1	E	77	SER
1	E	85	GLN
1	E	172	LYS
1	E	181	VAL
1	E	191	LEU
1	E	192	LYS
1	E	201	SER
1	F	17	ILE
1	F	19	ARG
1	F	42	ASN
1	F	43	HIS
1	F	57	GLU
1	F	86	LEU
1	F	166	ILE

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Mol	Chain	Res	Type
1	F	212	ILE
1	F	228	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (14) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	18	ASN
1	A	179	HIS
1	A	217	ASN
1	B	43	HIS
1	B	206	GLN
1	C	24	ASN
1	D	196	GLN
1	E	96	GLN
1	F	18	ASN
1	F	43	HIS
1	F	85	GLN
1	F	178	ASN
1	F	195	GLN
1	F	217	ASN

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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

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, 95th 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(Å²)	Q<0.9
1	A	242/246 (98%)	2.56	161 (66%)	0	0	37, 50, 64, 76	0
1	B	242/246 (98%)	2.61	170 (70%)	0	0	37, 51, 70, 89	0
1	C	236/246 (95%)	2.25	115 (48%)	0	0	26, 46, 59, 70	1 (0%)
1	D	242/246 (98%)	2.55	148 (61%)	0	0	36, 49, 64, 87	0
1	E	241/246 (97%)	2.58	150 (62%)	0	0	26, 52, 67, 82	1 (0%)
1	F	243/246 (98%)	2.69	161 (66%)	0	0	28, 51, 65, 80	2 (0%)
All	All	1446/1476 (97%)	2.54	905 (62%)	0	0	26, 50, 66, 89	4 (0%)

All (905) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
1	F	234	CYS	9.1
1	D	2	SER	8.9
1	B	56	GLY	7.9
1	F	76[A]	GLU	7.9
1	C	136	GLY	7.7
1	F	46	ASP	7.4
1	F	41	LEU	7.3
1	D	65	ASP	7.2
1	F	68	TYR	7.1
1	B	237	HIS	6.8
1	E	25	ALA	6.8
1	E	184	ALA	6.7
1	B	8	THR	6.7
1	D	202	THR	6.7
1	E	42	ASN	6.6
1	F	37	THR	6.6
1	A	139	PRO	6.4
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	6.2
1	E	18	ASN	6.1
1	C	239	ASP	6.1
1	F	110	GLY	6.1
1	A	25	ALA	6.0
1	B	19	ARG	6.0
1	E	68	TYR	6.0
1	A	140	GLY	5.9
1	A	65	ASP	5.9
1	A	70	SER	5.8
1	E	41	LEU	5.7
1	D	8	THR	5.7
1	C	23	LEU	5.7
1	A	7	SER	5.7
1	C	63	GLY	5.7
1	E	23	LEU	5.6
1	C	40	GLU	5.6
1	C	30	VAL	5.6
1	D	165	MET	5.6
1	B	69	MET	5.5
1	F	22	LYS	5.5
1	B	108	GLY	5.4
1	F	131	PRO	5.4
1	C	141	TRP	5.4
1	F	141	TRP	5.4
1	A	238	PRO	5.4
1	F	4	VAL	5.3
1	C	105	PHE	5.3
1	D	109	GLY	5.3
1	B	6	THR	5.3
1	F	10	ASP	5.3
1	C	71	LYS	5.3
1	B	26	MET	5.2
1	F	62	ALA	5.2
1	F	7	SER	5.2
1	E	235	PHE	5.2
1	A	63	GLY	5.2
1	F	3	LEU	5.2
1	D	214	LYS	5.2
1	F	72	ILE	5.2
1	C	172	LYS	5.2
1	A	21	ASP	5.1

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Mol	Chain	Res	Type	RSRZ
1	E	20	PRO	5.1
1	A	66	ILE	5.1
1	E	174	ILE	5.1
1	B	68	TYR	5.1
1	D	6	THR	5.1
1	D	233	ASN	5.1
1	A	138	PRO	5.1
1	E	183	LEU	5.0
1	B	18	ASN	5.0
1	F	2	SER	5.0
1	A	137	VAL	4.9
1	D	104	GLY	4.9
1	E	74	ALA	4.9
1	F	83	THR	4.9
1	A	1	MET	4.9
1	D	242	GLU	4.8
1	E	186	LEU	4.8
1	E	101	ALA	4.8
1	D	125	THR	4.8
1	D	129	GLY	4.8
1	A	136	GLY	4.8
1	A	241	GLN	4.8
1	C	1	MET	4.7
1	F	66	ILE	4.7
1	B	70	SER	4.7
1	E	236	THR	4.7
1	D	71	LYS	4.7
1	F	161	TYR	4.6
1	E	5	THR	4.6
1	A	221	ASP	4.6
1	A	64	ALA	4.6
1	D	11	GLY	4.6
1	D	40	GLU	4.6
1	D	63	GLY	4.6
1	F	130	GLN	4.6
1	E	97	PRO	4.6
1	E	10	ASP	4.6
1	B	72	ILE	4.5
1	D	59	ALA	4.5
1	F	63	GLY	4.5
1	E	38	PHE	4.5
1	E	14	THR	4.5

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Mol	Chain	Res	Type	RSRZ
1	D	126	ALA	4.5
1	D	238	PRO	4.5
1	B	63	GLY	4.5
1	B	136	GLY	4.5
1	A	12	ILE	4.5
1	E	72	ILE	4.5
1	B	105	PHE	4.5
1	E	66	ILE	4.4
1	E	138	PRO	4.4
1	A	11	GLY	4.4
1	C	78	VAL	4.4
1	E	6	THR	4.4
1	E	139	PRO	4.4
1	B	39	GLU	4.4
1	B	67	GLU	4.4
1	F	57	GLU	4.4
1	E	234	CYS	4.4
1	D	239	ASP	4.3
1	E	13	CYS	4.3
1	A	177	VAL	4.3
1	F	56	GLY	4.3
1	C	242	GLU	4.3
1	D	10	ASP	4.3
1	A	211	ALA	4.3
1	B	87	VAL	4.3
1	C	180	VAL	4.3
1	E	242	GLU	4.3
1	B	12	ILE	4.3
1	A	168	ALA	4.3
1	F	94	VAL	4.3
1	B	191	LEU	4.3
1	F	8	THR	4.2
1	C	15	VAL	4.2
1	E	11	GLY	4.2
1	D	220	LEU	4.2
1	F	45	ASP	4.2
1	A	174	ILE	4.2
1	C	37	THR	4.2
1	C	18	ASN	4.2
1	B	80	TYR	4.2
1	E	175	GLY	4.2
1	C	72	ILE	4.2

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Mol	Chain	Res	Type	RSRZ
1	E	12	ILE	4.2
1	F	9	SER	4.2
1	C	195	GLN	4.1
1	A	141	TRP	4.1
1	B	141	TRP	4.1
1	D	226	LEU	4.1
1	F	78	VAL	4.1
1	B	38	PHE	4.1
1	D	60	PHE	4.1
1	B	71	LYS	4.1
1	B	217	ASN	4.1
1	E	30	VAL	4.1
1	A	106	ALA	4.1
1	B	66	ILE	4.1
1	D	41	LEU	4.1
1	D	49	VAL	4.1
1	F	17	ILE	4.1
1	D	183	LEU	4.0
1	E	62	ALA	4.0
1	D	199	GLY	4.0
1	A	235	PHE	4.0
1	F	34	LEU	4.0
1	F	80	TYR	4.0
1	A	34	LEU	4.0
1	B	64	ALA	4.0
1	B	100	ALA	4.0
1	A	55	GLU	4.0
1	A	159	LEU	4.0
1	F	47	VAL	3.9
1	E	1	MET	3.9
1	B	153	ILE	3.9
1	E	123	ALA	3.9
1	E	240	ARG	3.9
1	A	191	LEU	3.9
1	C	96	GLN	3.9
1	E	4	VAL	3.9
1	E	64	ALA	3.9
1	D	234	CYS	3.9
1	F	187	GLN	3.9
1	A	237	HIS	3.9
1	B	74	ALA	3.9
1	D	83	THR	3.9

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Mol	Chain	Res	Type	RSRZ
1	F	28	THR	3.9
1	D	150	ILE	3.8
1	E	71	LYS	3.8
1	E	95	LYS	3.8
1	D	9	SER	3.8
1	A	79	GLU	3.8
1	D	241	GLN	3.8
1	D	68	TYR	3.8
1	D	172	LYS	3.8
1	C	14	THR	3.8
1	D	186	LEU	3.8
1	D	235	PHE	3.8
1	B	46	ASP	3.8
1	B	49	VAL	3.8
1	D	96	GLN	3.8
1	E	35	ILE	3.8
1	B	22	LYS	3.8
1	F	27	ASN	3.8
1	B	128	LEU	3.8
1	B	143	GLY	3.8
1	E	40	GLU	3.8
1	F	67	GLU	3.8
1	F	91	VAL	3.8
1	A	107	LEU	3.8
1	D	84	GLY	3.8
1	E	37	THR	3.8
1	A	188	GLU	3.7
1	D	7	SER	3.7
1	E	231	TRP	3.7
1	E	207	MET	3.7
1	F	193[A]	MET	3.7
1	F	109	GLY	3.7
1	F	53	THR	3.7
1	D	177	VAL	3.7
1	E	228	ILE	3.7
1	A	234	CYS	3.7
1	D	204	GLY	3.7
1	A	155	LYS	3.7
1	B	44	ASN	3.7
1	B	60	PHE	3.7
1	D	185	SER	3.7
1	F	123	ALA	3.7

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Mol	Chain	Res	Type	RSRZ
1	A	80	TYR	3.7
1	A	233	ASN	3.7
1	E	63	GLY	3.7
1	B	51	ILE	3.7
1	B	138	PRO	3.6
1	C	62	ALA	3.6
1	B	50	ILE	3.6
1	D	210	VAL	3.6
1	E	150	ILE	3.6
1	E	222	THR	3.6
1	F	159	LEU	3.6
1	F	43	HIS	3.6
1	C	122	ALA	3.6
1	F	59	ALA	3.6
1	B	161	TYR	3.6
1	A	13	CYS	3.6
1	F	90	THR	3.6
1	E	86	LEU	3.6
1	E	229	LEU	3.6
1	A	190	ALA	3.6
1	B	187	GLN	3.6
1	B	7	SER	3.6
1	D	56	GLY	3.6
1	F	11	GLY	3.6
1	A	39	GLU	3.6
1	E	121	ILE	3.6
1	F	119	ILE	3.6
1	D	137	VAL	3.6
1	F	242	GLU	3.6
1	A	125	THR	3.6
1	D	5	THR	3.6
1	A	0	HIS	3.6
1	B	126	ALA	3.6
1	B	195	GLN	3.6
1	A	35	ILE	3.6
1	B	107	LEU	3.6
1	D	3	LEU	3.6
1	E	3	LEU	3.6
1	B	84	GLY	3.5
1	D	153	ILE	3.5
1	A	6	THR	3.5
1	B	25	ALA	3.5

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Mol	Chain	Res	Type	RSRZ
1	E	212	ILE	3.5
1	D	127	LYS	3.5
1	D	164	LYS	3.5
1	F	200	ASN	3.5
1	C	43	HIS	3.5
1	E	166	ILE	3.5
1	B	104	GLY	3.5
1	B	133	VAL	3.5
1	F	16	LYS	3.5
1	A	60	PHE	3.5
1	C	66	ILE	3.5
1	D	4	VAL	3.5
1	F	36	LYS	3.5
1	B	77	SER	3.5
1	B	210	VAL	3.4
1	A	40	GLU	3.4
1	E	19	ARG	3.4
1	C	114	ALA	3.4
1	C	108	GLY	3.4
1	E	191	LEU	3.4
1	D	33	GLU	3.4
1	C	70	SER	3.4
1	D	101	ALA	3.4
1	B	130	GLN	3.4
1	E	214	LYS	3.4
1	E	91	VAL	3.4
1	F	20	PRO	3.4
1	A	10	ASP	3.4
1	A	72	ILE	3.4
1	B	42	ASN	3.4
1	C	102	VAL	3.4
1	E	47	VAL	3.4
1	F	61	SER	3.4
1	F	44	ASN	3.3
1	F	181	VAL	3.3
1	A	54	GLY	3.3
1	A	123	ALA	3.3
1	F	31	ALA	3.3
1	A	28	THR	3.3
1	E	8	THR	3.3
1	C	41	LEU	3.3
1	C	133	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
1	C	160	VAL	3.3
1	D	76	GLU	3.3
1	A	17	ILE	3.3
1	C	186	LEU	3.3
1	C	68	TYR	3.3
1	A	62	ALA	3.3
1	B	150	ILE	3.3
1	F	1	MET	3.3
1	D	74	ALA	3.3
1	F	38	PHE	3.3
1	E	187	GLN	3.3
1	A	102	VAL	3.3
1	E	49	VAL	3.3
1	F	15	VAL	3.3
1	C	140	GLY	3.3
1	B	24	ASN	3.3
1	F	58	LYS	3.3
1	D	138	PRO	3.3
1	A	38	PHE	3.3
1	F	235	PHE	3.3
1	B	4	VAL	3.3
1	B	132	GLU	3.2
1	F	135	ILE	3.2
1	E	220	LEU	3.2
1	B	181	VAL	3.2
1	F	102	VAL	3.2
1	F	160	VAL	3.2
1	A	53	THR	3.2
1	F	54	GLY	3.2
1	D	80	TYR	3.2
1	C	69	MET	3.2
1	C	103	ASN	3.2
1	B	121	ILE	3.2
1	F	186	LEU	3.2
1	F	240	ARG	3.2
1	D	102	VAL	3.2
1	F	5	THR	3.2
1	B	2	SER	3.2
1	E	45	ASP	3.2
1	F	50	ILE	3.2
1	D	47	VAL	3.2
1	F	196	GLN	3.2

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Mol	Chain	Res	Type	RSRZ
1	E	26[A]	MET	3.2
1	B	113	LEU	3.2
1	D	122	ALA	3.2
1	B	180	VAL	3.2
1	F	85	GLN	3.2
1	B	83	THR	3.2
1	F	6	THR	3.2
1	C	25	ALA	3.1
1	A	78	VAL	3.1
1	E	94	VAL	3.1
1	C	169	GLU	3.1
1	A	182	PRO	3.1
1	A	113	LEU	3.1
1	F	128	LEU	3.1
1	E	44	ASN	3.1
1	E	143	GLY	3.1
1	B	212	ILE	3.1
1	A	172	LYS	3.1
1	A	26	MET	3.1
1	F	195	GLN	3.1
1	A	226	LEU	3.1
1	B	186	LEU	3.1
1	D	86	LEU	3.1
1	E	159	LEU	3.1
1	F	14	THR	3.1
1	F	25	ALA	3.1
1	A	61	SER	3.1
1	E	46	ASP	3.1
1	D	240	ARG	3.1
1	D	16	LYS	3.1
1	D	159	LEU	3.1
1	F	202	THR	3.1
1	F	81	ALA	3.0
1	E	87	VAL	3.0
1	B	9	SER	3.0
1	C	42	ASN	3.0
1	D	24	ASN	3.0
1	A	187	GLN	3.0
1	E	79	GLU	3.0
1	E	147	LEU	3.0
1	F	107	LEU	3.0
1	A	154	ALA	3.0

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Mol	Chain	Res	Type	RSRZ
1	A	4	VAL	3.0
1	A	210	VAL	3.0
1	B	102	VAL	3.0
1	F	0	HIS	3.0
1	C	203	MET	3.0
1	C	95	LYS	3.0
1	A	134	THR	3.0
1	E	230	ALA	3.0
1	F	171	ALA	3.0
1	A	15	VAL	3.0
1	B	204	GLY	3.0
1	E	51	ILE	3.0
1	C	34	LEU	3.0
1	D	147	LEU	3.0
1	E	29	ASP	3.0
1	E	34	LEU	3.0
1	A	245	THR	3.0
1	D	141	TRP	3.0
1	B	135	ILE	3.0
1	D	55	GLU	3.0
1	A	114	ALA	3.0
1	E	100	ALA	3.0
1	A	160	VAL	3.0
1	D	87	VAL	3.0
1	F	150	ILE	2.9
1	A	93	LEU	2.9
1	E	80	TYR	2.9
1	B	225	GLY	2.9
1	D	225	GLY	2.9
1	B	200	ASN	2.9
1	C	101	ALA	2.9
1	E	154	ALA	2.9
1	E	198	ALA	2.9
1	A	49	VAL	2.9
1	A	133	VAL	2.9
1	B	78	VAL	2.9
1	D	222	THR	2.9
1	F	127	LYS	2.9
1	D	232	ARG	2.9
1	C	150	ILE	2.9
1	D	110	GLY	2.9
1	F	136	GLY	2.9

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Mol	Chain	Res	Type	RSRZ
1	F	42	ASN	2.9
1	B	165	MET	2.9
1	A	14	THR	2.9
1	B	157	LYS	2.9
1	C	22	LYS	2.9
1	C	0	HIS	2.9
1	F	125	THR	2.9
1	D	72	ILE	2.9
1	D	99	ILE	2.9
1	C	175	GLY	2.9
1	D	231	TRP	2.9
1	F	148	MET	2.9
1	A	42	ASN	2.9
1	A	48	LYS	2.9
1	C	201	SER	2.9
1	A	181	VAL	2.9
1	D	48	LYS	2.9
1	F	129	GLY	2.9
1	F	96	GLN	2.9
1	C	112	GLU	2.9
1	D	67	GLU	2.9
1	A	18	ASN	2.9
1	A	44	ASN	2.9
1	B	239	ASP	2.9
1	C	46	ASP	2.9
1	D	64	ALA	2.9
1	D	181	VAL	2.9
1	B	43	HIS	2.9
1	D	237	HIS	2.9
1	B	134	THR	2.9
1	E	56	GLY	2.8
1	E	223	GLY	2.8
1	F	104	GLY	2.8
1	D	203	MET	2.8
1	F	82	LYS	2.8
1	F	190	ALA	2.8
1	B	52	LEU	2.8
1	C	51	ILE	2.8
1	C	174	ILE	2.8
1	D	1	MET	2.8
1	C	238	PRO	2.8
1	F	172	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
1	E	210	VAL	2.8
1	A	105	PHE	2.8
1	A	51	ILE	2.8
1	C	17	ILE	2.8
1	F	113	LEU	2.8
1	E	70	SER	2.8
1	D	95	LYS	2.8
1	A	87	VAL	2.8
1	B	30	VAL	2.8
1	C	194	ALA	2.8
1	D	31	ALA	2.8
1	D	23	LEU	2.8
1	F	99	ILE	2.8
1	F	183	LEU	2.8
1	F	197	ILE	2.8
1	B	61	SER	2.8
1	B	144	THR	2.8
1	B	202	THR	2.8
1	A	244	MET	2.8
1	B	164	LYS	2.8
1	E	48	LYS	2.8
1	F	48	LYS	2.8
1	C	56	GLY	2.8
1	B	139	PRO	2.8
1	C	170	GLU	2.8
1	F	137	VAL	2.8
1	B	156	ALA	2.8
1	B	176	LEU	2.8
1	C	35	ILE	2.8
1	D	135	ILE	2.8
1	E	224	LEU	2.8
1	E	226	LEU	2.8
1	F	86	LEU	2.8
1	B	10	ASP	2.8
1	D	221	ASP	2.8
1	C	61	SER	2.8
1	A	143	GLY	2.8
1	A	145	GLN	2.7
1	B	13	CYS	2.7
1	C	154	ALA	2.7
1	C	184	ALA	2.7
1	E	89	ALA	2.7

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Mol	Chain	Res	Type	RSRZ
1	F	52	LEU	2.7
1	F	18	ASN	2.7
1	A	142	GLY	2.7
1	A	33	GLU	2.7
1	F	55	GLU	2.7
1	E	180	VAL	2.7
1	B	106	ALA	2.7
1	C	106	ALA	2.7
1	C	128	LEU	2.7
1	D	106	ALA	2.7
1	D	0	HIS	2.7
1	A	195	GLN	2.7
1	A	196	GLN	2.7
1	B	196	GLN	2.7
1	F	145	GLN	2.7
1	E	188	GLU	2.7
1	B	231	TRP	2.7
1	F	26	MET	2.7
1	F	115	MET	2.7
1	B	5	THR	2.7
1	E	27	ASN	2.7
1	A	131	PRO	2.7
1	C	21	ASP	2.7
1	E	137	VAL	2.7
1	B	159	LEU	2.7
1	D	52	LEU	2.7
1	D	212	ILE	2.7
1	F	106	ALA	2.7
1	B	155	LYS	2.7
1	B	65	ASP	2.7
1	F	219	ASP	2.7
1	D	180	VAL	2.7
1	A	150	ILE	2.6
1	A	186	LEU	2.7
1	C	191	LEU	2.7
1	A	192	LYS	2.6
1	F	157	LYS	2.6
1	C	231	TRP	2.6
1	C	240	ARG	2.6
1	C	139	PRO	2.6
1	D	236	THR	2.6
1	B	27	ASN	2.6

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Mol	Chain	Res	Type	RSRZ
1	C	178	ASN	2.6
1	D	44	ASN	2.6
1	A	130	GLN	2.6
1	A	132	GLU	2.6
1	A	239	ASP	2.6
1	B	86	LEU	2.6
1	B	124	ASP	2.6
1	C	192	LYS	2.6
1	D	58	LYS	2.6
1	E	177	VAL	2.6
1	F	169	GLU	2.6
1	C	197	ILE	2.6
1	A	2	SER	2.6
1	A	156	ALA	2.6
1	A	201	SER	2.6
1	D	81	ALA	2.6
1	F	74	ALA	2.6
1	C	138	PRO	2.6
1	A	3	LEU	2.6
1	E	15	VAL	2.6
1	F	220	LEU	2.6
1	B	40	GLU	2.6
1	D	35	ILE	2.6
1	A	73	SER	2.6
1	C	163	GLY	2.6
1	B	91	VAL	2.6
1	D	78	VAL	2.6
1	D	160	VAL	2.6
1	E	102	VAL	2.6
1	F	98	THR	2.6
1	F	176	LEU	2.6
1	B	99	ILE	2.6
1	B	101	ALA	2.6
1	E	124	ASP	2.6
1	E	211	ALA	2.6
1	A	179	HIS	2.6
1	D	43	HIS	2.6
1	D	70	SER	2.6
1	C	16	LYS	2.6
1	D	54	GLY	2.6
1	D	229	LEU	2.6
1	D	28	THR	2.6

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Mol	Chain	Res	Type	RSRZ
1	D	196	GLN	2.6
1	A	230	ALA	2.6
1	B	62	ALA	2.6
1	E	218	ALA	2.6
1	F	122	ALA	2.6
1	A	43	HIS	2.5
1	B	58	LYS	2.5
1	B	183	LEU	2.5
1	B	224	LEU	2.5
1	B	226	LEU	2.5
1	E	69	MET	2.5
1	A	171	ALA	2.5
1	A	184	ALA	2.5
1	C	211	ALA	2.5
1	A	120	ARG	2.5
1	B	118	ASP	2.5
1	A	16	LYS	2.5
1	B	127	LYS	2.5
1	A	86	LEU	2.5
1	B	152	GLY	2.5
1	C	93	LEU	2.5
1	C	104	GLY	2.5
1	D	151	VAL	2.5
1	B	14	THR	2.5
1	C	198	ALA	2.5
1	D	184	ALA	2.5
1	D	198	ALA	2.5
1	E	168	ALA	2.5
1	B	117	CYS	2.5
1	A	167	LYS	2.5
1	E	58	LYS	2.5
1	A	41	LEU	2.5
1	A	119	ILE	2.5
1	B	35	ILE	2.5
1	E	104	GLY	2.5
1	A	173	GLU	2.5
1	A	236	THR	2.5
1	C	235	PHE	2.5
1	D	154	ALA	2.5
1	F	126	ALA	2.5
1	E	120	ARG	2.5
1	A	111	CYS	2.5

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Mol	Chain	Res	Type	RSRZ
1	E	75	ASP	2.5
1	A	207	MET	2.5
1	B	147	LEU	2.5
1	D	148	MET	2.5
1	A	77	SER	2.5
1	A	223	GLY	2.5
1	F	73	SER	2.5
1	D	79	GLU	2.5
1	A	59	ALA	2.5
1	B	241	GLN	2.5
1	F	211	ALA	2.5
1	D	22	LYS	2.5
1	F	71	LYS	2.5
1	A	203	MET	2.4
1	C	113	LEU	2.4
1	F	21	ASP	2.4
1	D	12	ILE	2.4
1	F	212	ILE	2.4
1	B	185	SER	2.4
1	C	79	GLU	2.4
1	B	211	ALA	2.4
1	C	161	TYR	2.4
1	E	32	LYS	2.4
1	B	0	HIS	2.4
1	A	220	LEU	2.4
1	D	50	ILE	2.4
1	E	219	ASP	2.4
1	F	65	ASP	2.4
1	D	108	GLY	2.4
1	F	180	VAL	2.4
1	B	201	SER	2.4
1	D	155	LYS	2.4
1	F	105	PHE	2.4
1	D	100	ALA	2.4
1	B	162	THR	2.4
1	E	43	HIS	2.4
1	D	93	LEU	2.4
1	F	191	LEU	2.4
1	F	233	ASN	2.4
1	E	197	ILE	2.4
1	F	153	ILE	2.4
1	A	124	ASP	2.4

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Mol	Chain	Res	Type	RSRZ
1	D	136	GLY	2.4
1	F	84	GLY	2.4
1	F	19	ARG	2.4
1	A	189	GLU	2.4
1	E	76	GLU	2.4
1	C	187	GLN	2.4
1	F	144	THR	2.4
1	A	165	MET	2.4
1	C	148	MET	2.4
1	D	191	LEU	2.4
1	D	197	ILE	2.4
1	F	166	ILE	2.4
1	F	97	PRO	2.4
1	A	151	VAL	2.4
1	B	215	GLY	2.4
1	B	223	GLY	2.4
1	F	140	GLY	2.4
1	B	158	GLU	2.4
1	C	39	GLU	2.4
1	D	62	ALA	2.4
1	E	122	ALA	2.4
1	E	96	GLN	2.4
1	E	193	MET	2.4
1	F	88	THR	2.4
1	C	86	LEU	2.4
1	C	4	VAL	2.3
1	B	110	GLY	2.3
1	E	140	GLY	2.3
1	D	75	ASP	2.3
1	A	227	GLU	2.3
1	B	123	ALA	2.3
1	E	195	GLN	2.3
1	C	193[A]	MET	2.3
1	A	5	THR	2.3
1	A	37	THR	2.3
1	A	229	LEU	2.3
1	B	3	LEU	2.3
1	C	12	ILE	2.3
1	C	212	ILE	2.3
1	B	36	LYS	2.3
1	B	82	LYS	2.3
1	F	192	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	177	VAL	2.3
1	C	219	ASP	2.3
1	A	100	ALA	2.3
1	B	168	ALA	2.3
1	E	92	GLU	2.3
1	D	111	CYS	2.3
1	E	206	GLN	2.3
1	B	229	LEU	2.3
1	E	176	LEU	2.3
1	E	88	THR	2.3
1	E	90	THR	2.3
1	B	205	VAL	2.3
1	C	129	GLY	2.3
1	E	109	GLY	2.3
1	A	67	GLU	2.3
1	A	126	ALA	2.3
1	D	189	GLU	2.3
1	F	198	ALA	2.3
1	A	193	MET	2.3
1	C	118	ASP	2.3
1	D	113	LEU	2.3
1	A	116	SER	2.3
1	A	135	ILE	2.3
1	D	32	LYS	2.3
1	E	237	HIS	2.3
1	A	185	SER	2.3
1	F	35	ILE	2.3
1	F	121	ILE	2.3
1	C	142	GLY	2.3
1	C	143	GLY	2.3
1	C	60	PHE	2.3
1	B	122	ALA	2.3
1	C	31	ALA	2.3
1	C	33	GLU	2.3
1	C	59	ALA	2.3
1	D	25	ALA	2.3
1	D	57	GLU	2.3
1	F	154	ALA	2.3
1	B	75	ASP	2.3
1	C	226	LEU	2.3
1	F	118	ASP	2.3
1	B	214	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
1	B	174	ILE	2.3
1	E	17	ILE	2.3
1	F	51	ILE	2.3
1	B	88	THR	2.3
1	E	83	THR	2.3
1	E	162	THR	2.3
1	F	231	TRP	2.3
1	E	116	SER	2.3
1	B	129	GLY	2.3
1	C	215	GLY	2.3
1	D	42	ASN	2.2
1	B	220	LEU	2.2
1	F	95	LYS	2.2
1	F	155	LYS	2.2
1	B	37	THR	2.2
1	B	98	THR	2.2
1	A	109	GLY	2.2
1	D	143	GLY	2.2
1	C	67	GLU	2.2
1	D	21	ASP	2.2
1	E	146	ARG	2.2
1	B	222	THR	2.2
1	A	208	SER	2.2
1	B	208	SER	2.2
1	D	161	TYR	2.2
1	B	163	GLY	2.2
1	B	114	ALA	2.2
1	E	85	GLN	2.2
1	F	239	ASP	2.2
1	B	15	VAL	2.2
1	A	162	THR	2.2
1	F	222	THR	2.2
1	E	204	GLY	2.2
1	D	167	LYS	2.2
1	F	23	LEU	2.2
1	A	92	GLU	2.2
1	E	190	ALA	2.2
1	C	19	ARG	2.2
1	D	17	ILE	2.2
1	D	19	ARG	2.2
1	E	151	VAL	2.2
1	B	90	THR	2.2

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Mol	Chain	Res	Type	RSRZ
1	D	144	THR	2.2
1	B	48	LYS	2.2
1	A	52	LEU	2.2
1	E	52	LEU	2.2
1	A	112	GLU	2.2
1	B	57	GLU	2.2
1	E	194	ALA	2.2
1	D	216	ARG	2.1
1	E	241	GLN	2.1
1	B	238	PRO	2.1
1	D	20	PRO	2.1
1	E	78	VAL	2.1
1	F	138	PRO	2.1
1	C	115	MET	2.1
1	A	231	TRP	2.1
1	D	34	LEU	2.1
1	E	93	LEU	2.1
1	C	2	SER	2.1
1	B	55	GLU	2.1
1	F	40	GLU	2.1
1	C	94	VAL	2.1
1	B	115	MET	2.1
1	B	95	LYS	2.1
1	B	172	LYS	2.1
1	E	16	LYS	2.1
1	B	221	ASP	2.1
1	B	28	THR	2.1
1	A	19	ARG	2.1
1	A	194	ALA	2.1
1	A	57	GLU	2.1
1	B	92	GLU	2.1
1	B	111	CYS	2.1
1	C	50	ILE	2.1
1	E	33	GLU	2.1
1	F	228	ILE	2.1
1	E	115	MET	2.1
1	D	90	THR	2.1
1	E	60	PHE	2.1
1	B	89	ALA	2.1
1	F	184	ALA	2.1
1	E	57	GLU	2.1
1	E	161	TYR	2.1

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Mol	Chain	Res	Type	RSRZ
1	C	48	LYS	2.1
1	B	131	PRO	2.1
1	D	131	PRO	2.1
1	B	93	LEU	2.1
1	A	108	GLY	2.1
1	C	204	GLY	2.1
1	F	143	GLY	2.1
1	A	88	THR	2.1
1	C	221	ASP	2.1
1	D	37	THR	2.1
1	E	118	ASP	2.1
1	A	197	ILE	2.1
1	E	31	ALA	2.1
1	E	106	ALA	2.1
1	B	112	GLU	2.1
1	A	58	LYS	2.0
1	E	127	LYS	2.0
1	F	13	CYS	2.0
1	D	94	VAL	2.0
1	F	133	VAL	2.0
1	E	182	PRO	2.0
1	C	217	ASN	2.0
1	A	149	ARG	2.0
1	A	175	GLY	2.0
1	B	240	ARG	2.0
1	A	75	ASP	2.0
1	C	228	ILE	2.0
1	D	166	ILE	2.0
1	A	122	ALA	2.0
1	B	189	GLU	2.0
1	B	242	GLU	2.0
1	C	26	MET	2.0
1	A	180	VAL	2.0
1	F	237	HIS	2.0
1	F	139	PRO	2.0
1	A	27	ASN	2.0
1	F	24	ASN	2.0
1	F	60	PHE	2.0
1	B	21	ASP	2.0
1	B	29	ASP	2.0
1	B	227	GLU	2.0
1	E	170	GLU	2.0

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Mol	Chain	Res	Type	RSRZ
1	F	29	ASP	2.0
1	E	22	LYS	2.0
1	A	115	MET	2.0
1	A	47	VAL	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 oligosaccharides 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.