Full wwPDB NMR Structure Validation Report (i)

Feb 15, 2018 – 11:12 pm GMT

PDB ID	:	1NI7
Title	:	NORTHEAST STRUCTURAL GENOMIC CONSORTIUM TARGET ER75
Authors	:	Liu, G.; Chiang, Y.; Acton, T.; Montelione, G.T.; Szyperski, T.; Northeast Structural Genomics Consortium (NESG)
Deposited on	:	2002-12-21

This is a Full wwPDB NMR 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/NMRValidationReportHelp
with specific help available everywhere you see the (i) symbol.

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

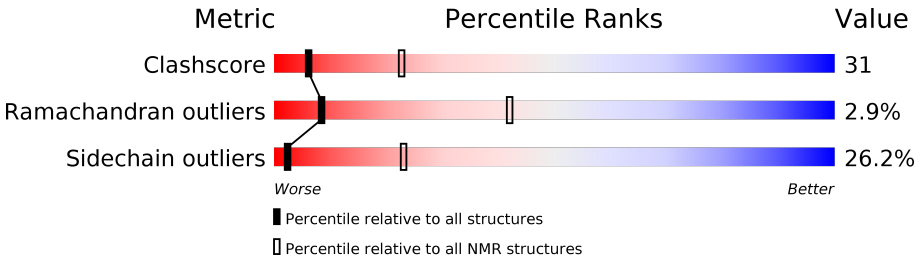
Cyrange	:	Kirchner and Güntert (2011)
NmrClust	:	Kelley et al. (1996)
MolProbity	:	4.02b-467
Percentile statistics	:	20171227.v01 (using entries in the PDB archive December 27th 2017)
RCI	:	v_1n_11_5_13_A (Berjanski et al., 2005)
PANAV	:	Wang et al. (2010)
ShiftChecker	:	trunk30686
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	trunk30686

1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
SOLUTION NMR

The overall completeness of chemical shifts assignment was not calculated.

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)	NMR archive (#Entries)
Clashscore	136279	12091
Ramachandran outliers	132675	10835
Sidechain outliers	132484	10811

The table below summarises the geometric issues observed across the polymeric chains and their fit to the experimental data. The red, orange, yellow and green segments indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria. A cyan segment indicates the fraction of residues that are not part of the well-defined cores, and 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%

Mol	Chain	Length	Quality of chain
1	A	155	32% 47% 5% 12% .

2 Ensemble composition and analysis

This entry contains 20 models. Model 7 is the overall representative, medoid model (most similar to other models). The authors have identified model 1 as representative, based on the following criterion: *fewest violations*.

The following residues are included in the computation of the global validation metrics.

Well-defined (core) protein residues			
Well-defined core	**Residue range (total)**	**Backbone RMSD (Å)**	**Medoid model**
1	A:9-A:122, A:133-A:149 (131)	0.42	7

Ill-defined regions of proteins are excluded from the global statistics.

Ligands and non-protein polymers are included in the analysis.

The models can be grouped into 3 clusters and 4 single-model clusters were found.

Cluster number	Models
1	3, 4, 7, 8, 14, 18
2	1, 2, 5, 6, 15
3	9, 10, 12, 13, 17
Single-model clusters	11; 16; 19; 20

3 Entry composition (i)

There is only 1 type of molecule in this entry. The entry contains 2290 atoms, of which 1152 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Hypothetical protein ygdK.

Mol	Chain	Residues	Atoms						Trace
			Total	C	H	N	O	S	
1	A	149	2290	721	1152	198	215	4	0

There are 8 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	148	LEU	-	EXPRESSION TAG	UNP Q46926
A	149	GLU	-	EXPRESSION TAG	UNP Q46926
A	150	HIS	-	EXPRESSION TAG	UNP Q46926
A	151	HIS	-	EXPRESSION TAG	UNP Q46926
A	152	HIS	-	EXPRESSION TAG	UNP Q46926
A	153	HIS	-	EXPRESSION TAG	UNP Q46926
A	154	HIS	-	EXPRESSION TAG	UNP Q46926
A	155	HIS	-	EXPRESSION TAG	UNP Q46926

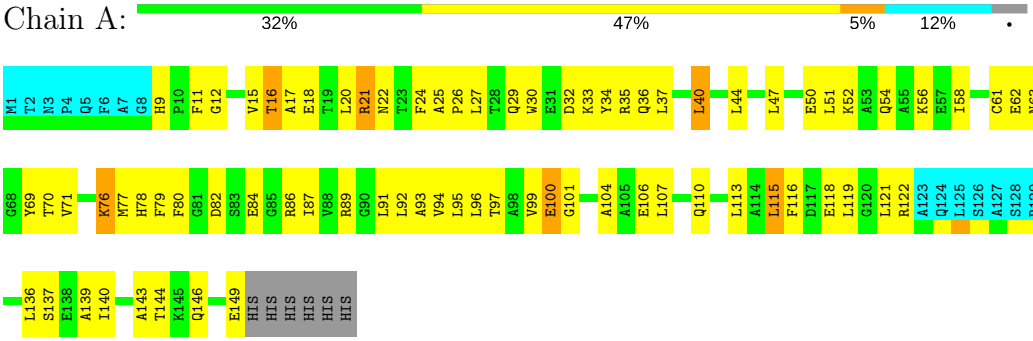
4 Residue-property plots

4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA and DNA chains in the entry. The first graphic is the same as shown in the summary in section 1 of this report. The second graphic shows the sequence where residues are colour-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. Stretches of 2 or more consecutive residues without any outliers are shown as green connectors. Residues which are classified as ill-defined in the NMR ensemble, are shown in cyan with an underline colour-coded according to the previous scheme. Residues which were present in the experimental sample, but not modelled in the final structure are shown in grey.

• Molecule 1: Hypothetical protein ygdK

Chain A:



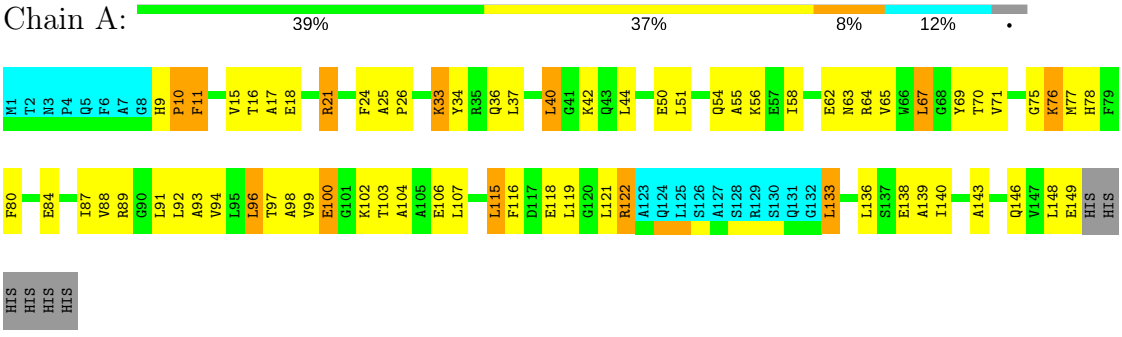
4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

4.2.1 Score per residue for model 1

• Molecule 1: Hypothetical protein ygdK

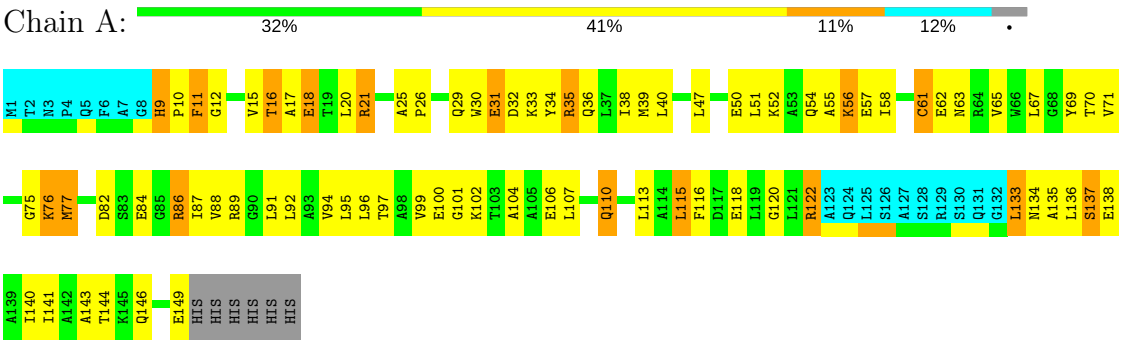
Chain A:



4.2.2 Score per residue for model 2

• Molecule 1: Hypothetical protein ygdK

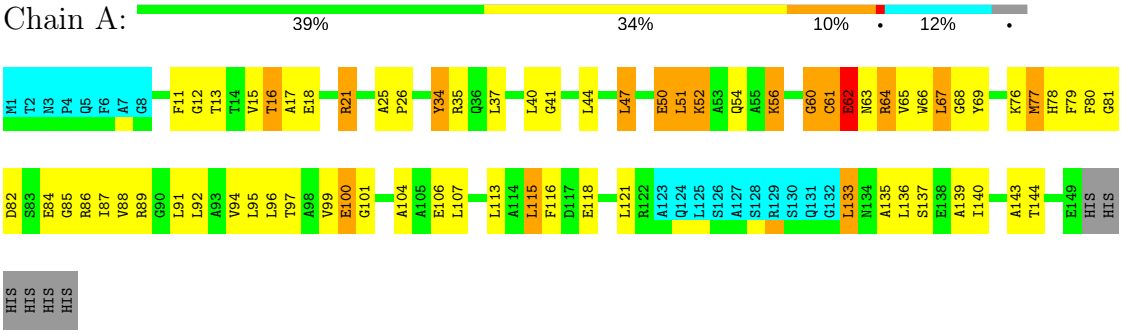
Chain A:



4.2.3 Score per residue for model 3

• Molecule 1: Hypothetical protein ygdK

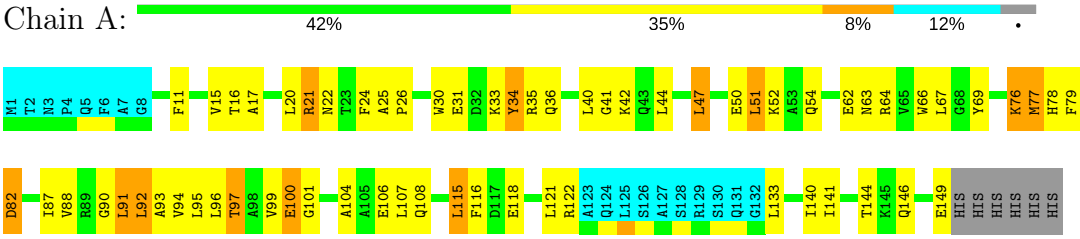
Chain A:



4.2.4 Score per residue for model 4

• Molecule 1: Hypothetical protein ygdK

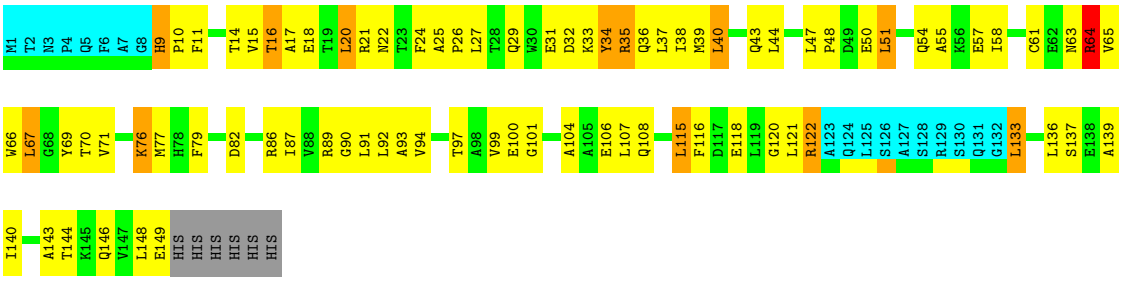
Chain A:



4.2.5 Score per residue for model 5

• Molecule 1: Hypothetical protein ygdK

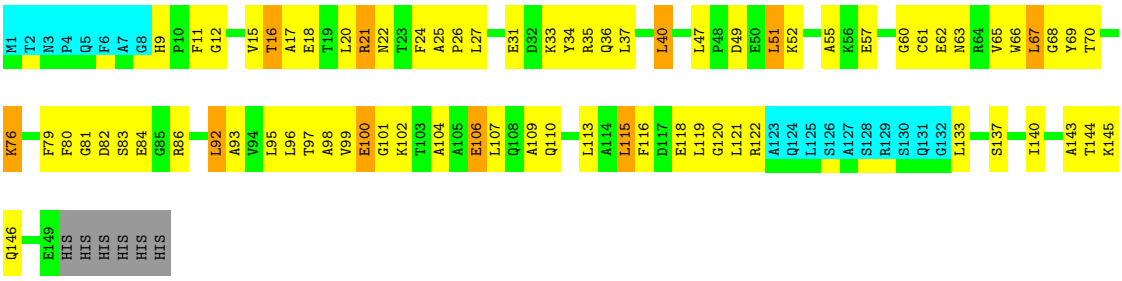
Chain A:



4.2.6 Score per residue for model 6

• Molecule 1: Hypothetical protein ygdK

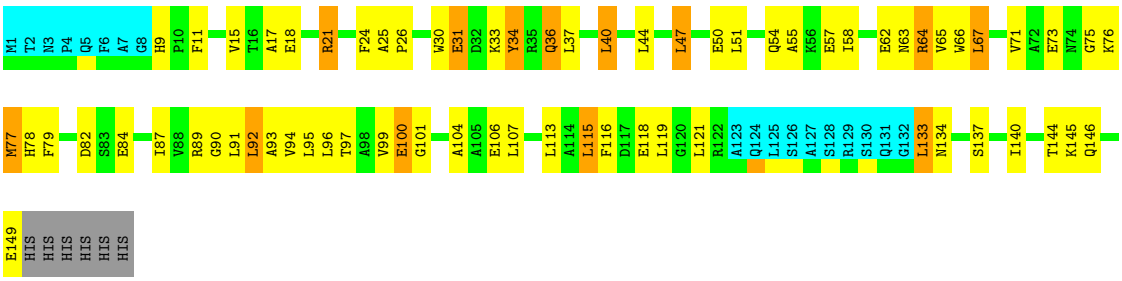
Chain A:



4.2.7 Score per residue for model 7 (medoid)

• Molecule 1: Hypothetical protein ygdK

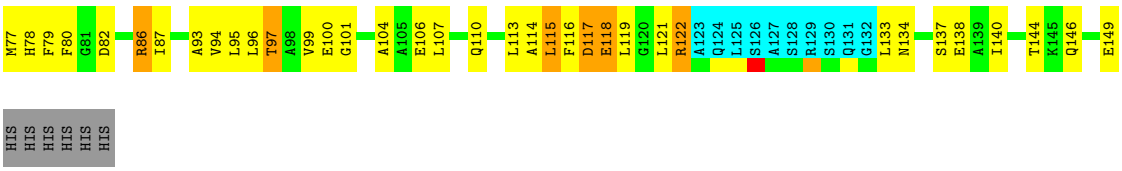
Chain A:



4.2.8 Score per residue for model 8

• Molecule 1: Hypothetical protein ygdK

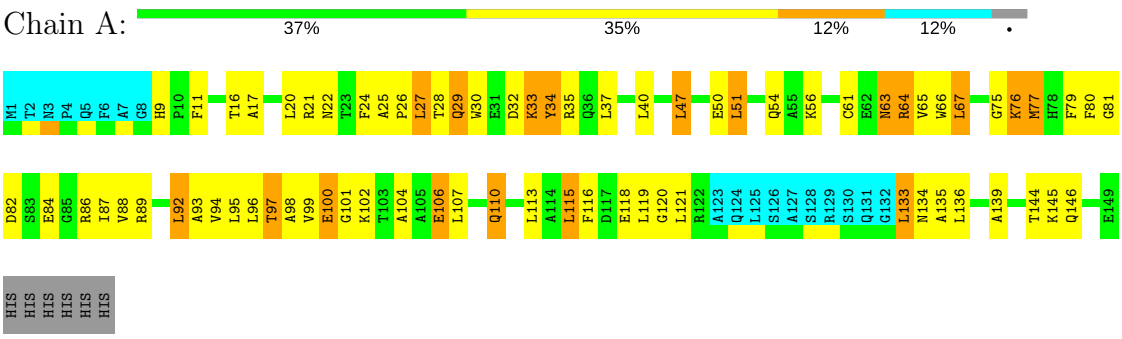
Chain A:



4.2.9 Score per residue for model 9

• Molecule 1: Hypothetical protein ygdK

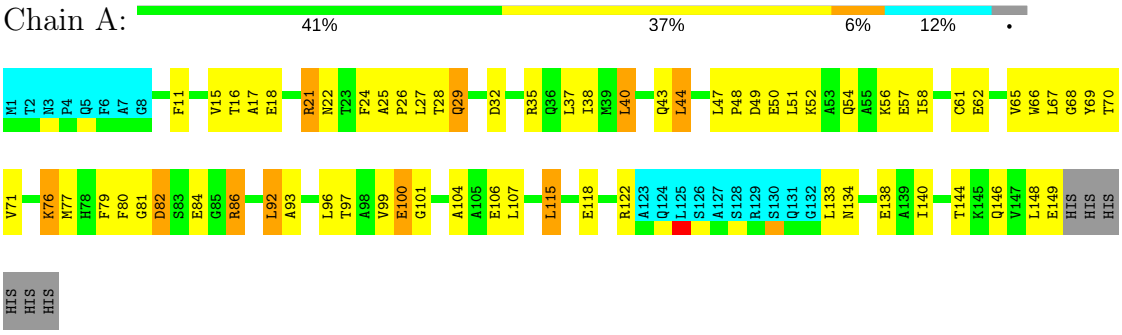
Chain A:



4.2.10 Score per residue for model 10

• Molecule 1: Hypothetical protein ygdK

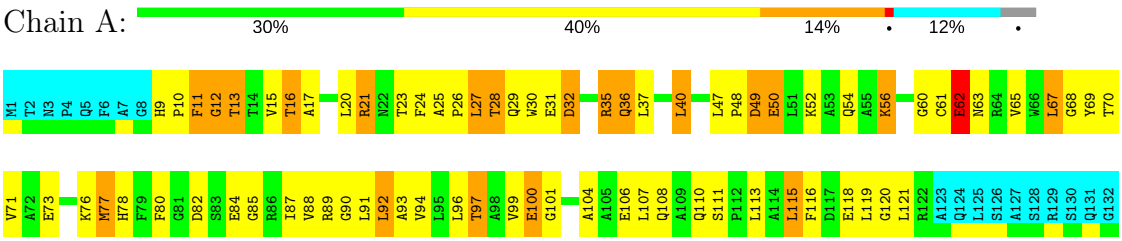
Chain A:



4.2.11 Score per residue for model 11

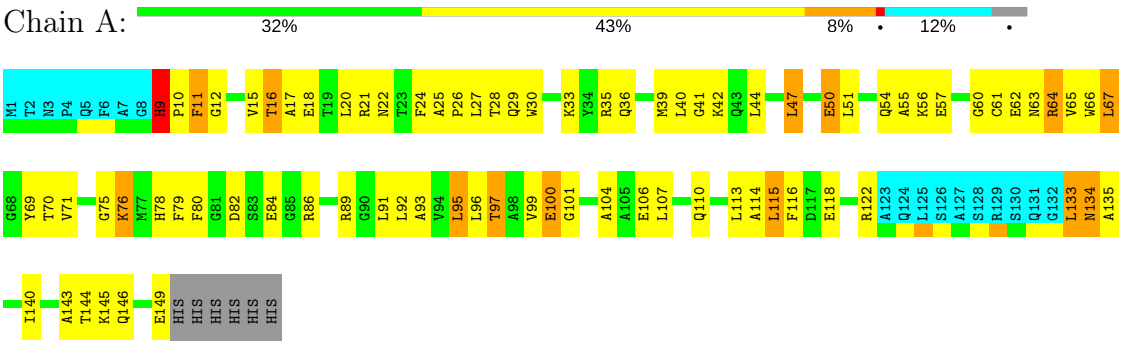
• Molecule 1: Hypothetical protein ygdK

Chain A:



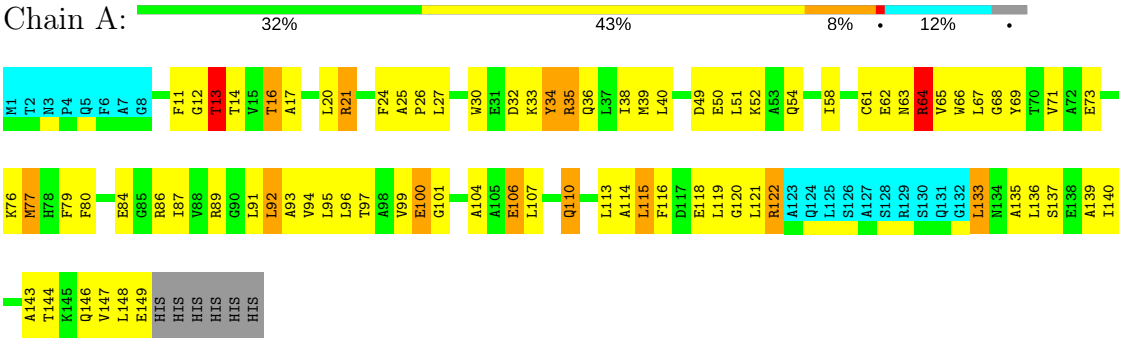
4.2.12 Score per residue for model 12

• Molecule 1: Hypothetical protein ygdK



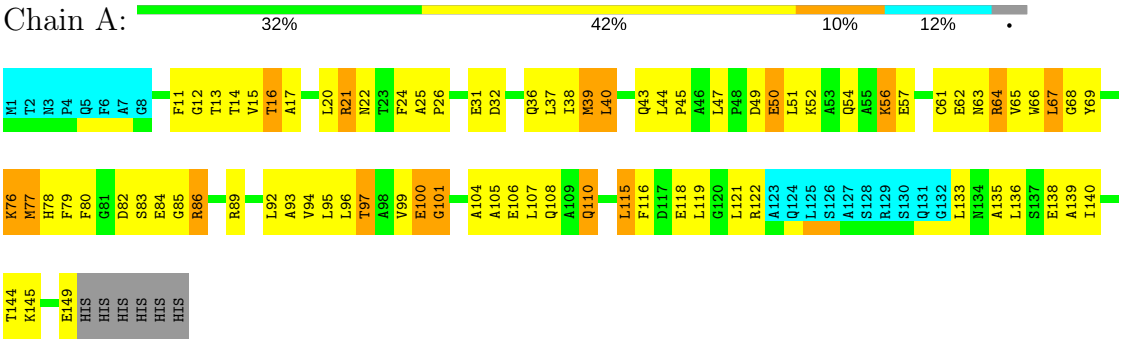
4.2.13 Score per residue for model 13

• Molecule 1: Hypothetical protein ygdK



4.2.14 Score per residue for model 14

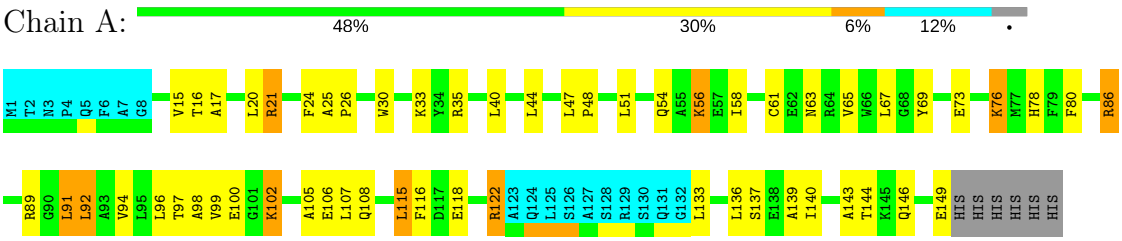
• Molecule 1: Hypothetical protein ygdK



4.2.15 Score per residue for model 15

• Molecule 1: Hypothetical protein ygdK

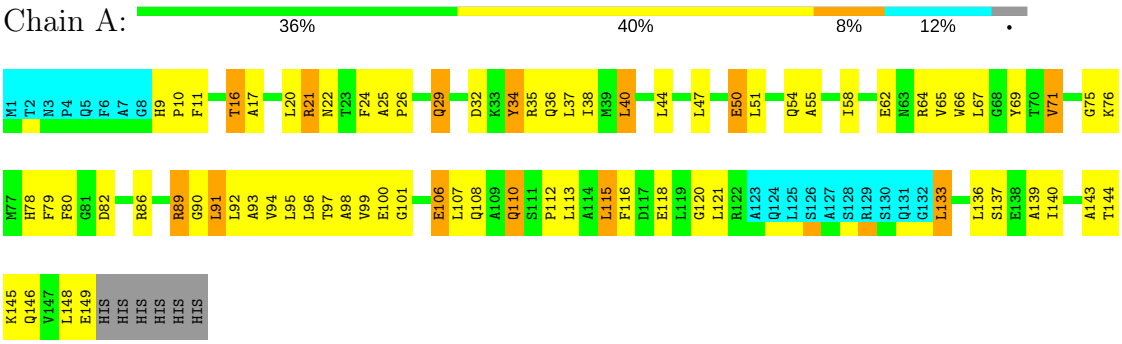
Chain A:



4.2.16 Score per residue for model 16

• Molecule 1: Hypothetical protein ygdK

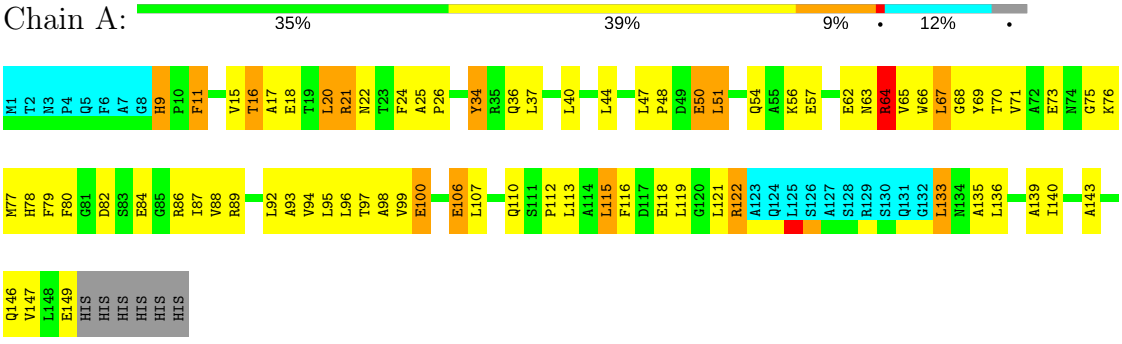
Chain A:



4.2.17 Score per residue for model 17

• Molecule 1: Hypothetical protein ygdK

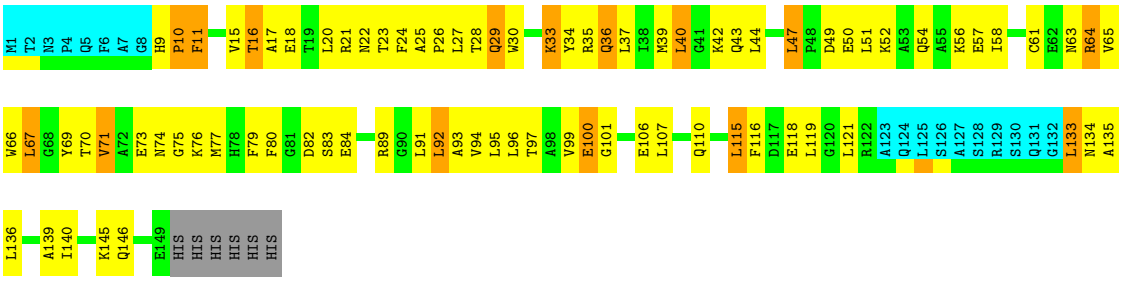
Chain A:



4.2.18 Score per residue for model 18

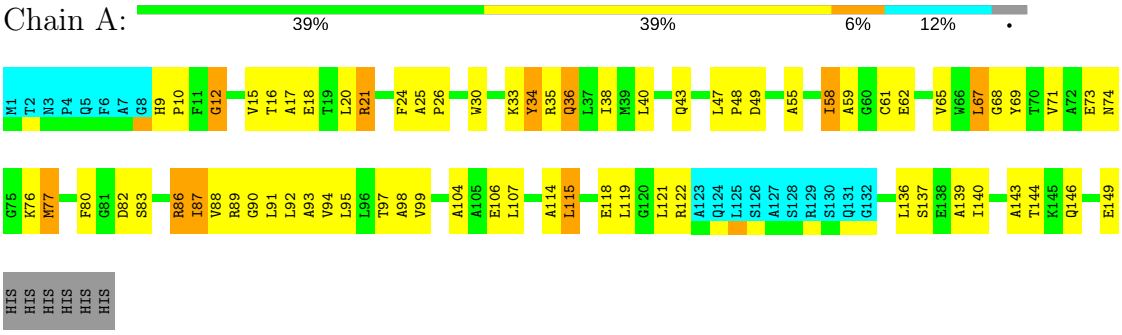
• Molecule 1: Hypothetical protein ygdK

Chain A:



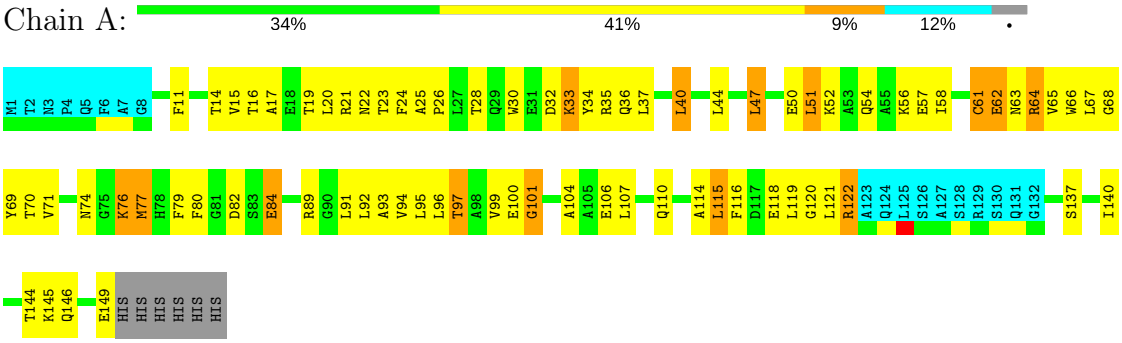
4.2.19 Score per residue for model 19

• Molecule 1: Hypothetical protein ygdK



4.2.20 Score per residue for model 20

• Molecule 1: Hypothetical protein ygdK



5 Refinement protocol and experimental data overview

The models were refined using the following method: *distance geometry simulated annealing torsion angle dynamics*.

Of the 100 calculated structures, 20 were deposited, based on the following criterion: *target function*.

The following table shows the software used for structure solution, optimisation and refinement.

Software name	Classification	Version
DYANA	structure solution	1.5
DYANA	refinement	1.5

No chemical shift data was provided. No validations of the models with respect to experimental NMR restraints is performed at this time.

6 Model quality

6.1 Standard geometry

There are no covalent bond-length or bond-angle outliers.

There are no bond-length outliers.

There are no bond-angle outliers.

There are no chirality outliers.

There are no planarity outliers.

6.2 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 each 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 averaged over the ensemble.

Mol	Chain	Non-H	H(model)	H(added)	Clashes
1	A	1010	1030	1030	64±10
All	All	20200	20600	20600	1276

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 31.

All unique clashes are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:37:LEU:HD21	1:A:121:LEU:HD13	1.08	1.20	20	3
1:A:17:ALA:HB2	1:A:115:LEU:HD11	1.05	1.24	18	18
1:A:95:LEU:HD21	1:A:140:ILE:HD11	1.05	1.27	3	8
1:A:37:LEU:HD11	1:A:121:LEU:HD22	1.03	1.29	1	10
1:A:99:VAL:HG12	1:A:107:LEU:HD21	1.01	1.19	8	12
1:A:11:PHE:CE2	1:A:44:LEU:HD13	0.95	1.97	4	3
1:A:91:LEU:HD22	1:A:133:LEU:HD11	0.93	1.40	7	1
1:A:140:ILE:O	1:A:144:THR:HG23	0.92	1.63	16	11
1:A:17:ALA:HB2	1:A:115:LEU:HD21	0.90	1.42	19	5
1:A:44:LEU:HD21	1:A:82:ASP:OD2	0.90	1.66	10	1
1:A:17:ALA:CB	1:A:115:LEU:HD11	0.88	1.98	18	15
1:A:107:LEU:HD22	1:A:140:ILE:HG21	0.88	1.41	10	2
1:A:95:LEU:HD21	1:A:140:ILE:CD1	0.87	2.00	7	3
1:A:94:VAL:HG21	1:A:121:LEU:HD12	0.87	1.43	20	5

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:99:VAL:HG12	1:A:107:LEU:CD2	0.86	2.01	8	12
1:A:92:LEU:O	1:A:96:LEU:HD12	0.86	1.70	16	8
1:A:47:LEU:HD22	1:A:82:ASP:OD1	0.85	1.70	7	8
1:A:91:LEU:HD23	1:A:116:PHE:CE1	0.85	2.06	18	7
1:A:20:LEU:HD12	1:A:97:THR:HG21	0.83	1.51	16	7
1:A:79:PHE:CZ	1:A:140:ILE:HG23	0.83	2.08	14	9
1:A:58:ILE:HB	1:A:65:VAL:HG13	0.83	1.48	10	1
1:A:99:VAL:HG12	1:A:107:LEU:HD22	0.82	1.50	20	7
1:A:113:LEU:HD22	1:A:133:LEU:HD22	0.82	1.49	3	6
1:A:24:PHE:CE2	1:A:121:LEU:HD11	0.81	2.10	6	2
1:A:36:GLN:NE2	1:A:40:LEU:HD23	0.81	1.91	7	2
1:A:99:VAL:CG1	1:A:107:LEU:HD21	0.80	2.06	19	5
1:A:37:LEU:HD11	1:A:121:LEU:CD2	0.80	2.06	1	2
1:A:20:LEU:CD1	1:A:97:THR:HG21	0.79	2.07	5	5
1:A:107:LEU:HD13	1:A:140:ILE:HG21	0.77	1.54	15	6
1:A:92:LEU:O	1:A:96:LEU:HD22	0.77	1.79	20	2
1:A:113:LEU:CD2	1:A:133:LEU:HD22	0.76	2.10	17	3
1:A:40:LEU:HD12	1:A:93:ALA:CB	0.76	2.11	8	5
1:A:17:ALA:CB	1:A:115:LEU:HD21	0.76	2.11	13	13
1:A:79:PHE:CE2	1:A:140:ILE:HG23	0.76	2.16	14	7
1:A:116:PHE:CE2	1:A:133:LEU:HD21	0.75	2.17	16	2
1:A:69:TYR:CZ	1:A:143:ALA:HB1	0.74	2.17	13	3
1:A:69:TYR:OH	1:A:143:ALA:HB2	0.74	1.82	5	6
1:A:37:LEU:CD1	1:A:121:LEU:HD22	0.74	2.12	1	2
1:A:11:PHE:CZ	1:A:93:ALA:HB1	0.74	2.18	13	1
1:A:55:ALA:HB1	1:A:67:LEU:C	0.74	2.02	7	8
1:A:12:GLY:O	1:A:16:THR:HG23	0.73	1.83	2	4
1:A:107:LEU:HD13	1:A:140:ILE:CG2	0.72	2.13	20	7
1:A:71:VAL:HG22	1:A:77:MET:HG3	0.72	1.59	11	4
1:A:113:LEU:HD13	1:A:122:ARG:NH2	0.72	2.00	13	1
1:A:71:VAL:HG12	1:A:75:GLY:O	0.72	1.85	18	2
1:A:79:PHE:CD1	1:A:99:VAL:HG21	0.72	2.19	18	9
1:A:65:VAL:HG11	1:A:136:LEU:HD21	0.71	1.61	18	2
1:A:71:VAL:HG13	1:A:75:GLY:O	0.71	1.85	8	2
1:A:104:ALA:CB	1:A:144:THR:HG22	0.70	2.16	12	5
1:A:104:ALA:HB1	1:A:144:THR:HB	0.70	1.61	13	7
1:A:21:ARG:HB3	1:A:119:LEU:HD21	0.70	1.62	9	2
1:A:25:ALA:HB3	1:A:26:PRO:HD3	0.69	1.63	1	20
1:A:94:VAL:HG21	1:A:121:LEU:CD1	0.69	2.16	1	10
1:A:104:ALA:HB1	1:A:144:THR:CB	0.69	2.17	8	14
1:A:89:ARG:O	1:A:92:LEU:HD23	0.69	1.88	18	3

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:80:PHE:HA	1:A:96:LEU:HD21	0.69	1.63	14	3
1:A:11:PHE:CZ	1:A:96:LEU:HD22	0.68	2.23	7	2
1:A:16:THR:HA	1:A:97:THR:HG23	0.68	1.63	13	8
1:A:17:ALA:HA	1:A:115:LEU:HD21	0.68	1.65	5	5
1:A:30:TRP:O	1:A:30:TRP:CE3	0.68	2.47	20	1
1:A:79:PHE:O	1:A:96:LEU:HD12	0.68	1.88	13	3
1:A:104:ALA:HB1	1:A:144:THR:HG22	0.67	1.64	11	5
1:A:104:ALA:HB1	1:A:144:THR:HA	0.67	1.65	14	7
1:A:20:LEU:HD21	1:A:40:LEU:HD11	0.67	1.64	6	1
1:A:89:ARG:HA	1:A:92:LEU:HD12	0.67	1.67	17	5
1:A:15:VAL:O	1:A:15:VAL:HG12	0.67	1.88	6	3
1:A:92:LEU:HG	1:A:96:LEU:HD13	0.67	1.67	11	2
1:A:34:TYR:O	1:A:38:ILE:HD12	0.67	1.90	5	3
1:A:23:THR:HG21	1:A:36:GLN:OE1	0.66	1.90	18	1
1:A:47:LEU:HD13	1:A:81:GLY:O	0.66	1.89	9	1
1:A:122:ARG:HG3	1:A:133:LEU:HD13	0.66	1.68	1	1
1:A:38:ILE:HG23	1:A:86:ARG:HB3	0.66	1.66	14	5
1:A:17:ALA:HB2	1:A:115:LEU:CD1	0.65	2.16	14	7
1:A:34:TYR:CD1	1:A:87:ILE:HD13	0.65	2.26	3	2
1:A:34:TYR:HA	1:A:37:LEU:HD12	0.65	1.69	18	4
1:A:47:LEU:HD12	1:A:48:PRO:HD2	0.64	1.69	15	4
1:A:16:THR:O	1:A:20:LEU:HD12	0.64	1.92	5	4
1:A:71:VAL:HG22	1:A:77:MET:CG	0.64	2.21	19	6
1:A:91:LEU:HD23	1:A:116:PHE:CE2	0.63	2.28	4	3
1:A:11:PHE:CE1	1:A:93:ALA:CB	0.63	2.82	18	2
1:A:40:LEU:HD12	1:A:93:ALA:HB3	0.63	1.68	6	4
1:A:113:LEU:HD21	1:A:137:SER:HB2	0.63	1.70	8	6
1:A:16:THR:C	1:A:20:LEU:HD12	0.63	2.14	5	2
1:A:34:TYR:CE1	1:A:87:ILE:HD13	0.63	2.28	4	2
1:A:94:VAL:CG2	1:A:121:LEU:HD12	0.62	2.22	20	1
1:A:11:PHE:CE2	1:A:96:LEU:HD13	0.62	2.30	8	1
1:A:17:ALA:HB1	1:A:115:LEU:HD11	0.62	1.70	15	2
1:A:115:LEU:HD23	1:A:119:LEU:HD11	0.62	1.72	6	2
1:A:11:PHE:CD2	1:A:96:LEU:HD13	0.62	2.30	8	1
1:A:21:ARG:O	1:A:25:ALA:HB2	0.62	1.94	5	9
1:A:30:TRP:CZ3	1:A:120:GLY:O	0.62	2.52	20	1
1:A:94:VAL:HG13	1:A:115:LEU:CD2	0.62	2.25	11	2
1:A:79:PHE:CE1	1:A:107:LEU:HD11	0.61	2.30	17	2
1:A:38:ILE:HG23	1:A:86:ARG:CB	0.61	2.25	2	2
1:A:68:GLY:O	1:A:80:PHE:CD2	0.61	2.54	14	6
1:A:77:MET:SD	1:A:79:PHE:CZ	0.61	2.94	4	3

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:20:LEU:HD11	1:A:97:THR:HG21	0.60	1.70	5	1
1:A:15:VAL:HG12	1:A:15:VAL:O	0.60	1.95	10	6
1:A:104:ALA:HA	1:A:144:THR:HG22	0.60	1.73	7	3
1:A:69:TYR:O	1:A:70:THR:HG23	0.60	1.97	20	11
1:A:21:ARG:CG	1:A:119:LEU:HD21	0.60	2.27	20	1
1:A:104:ALA:HB1	1:A:144:THR:CA	0.60	2.25	14	5
1:A:11:PHE:CE1	1:A:44:LEU:HD11	0.60	2.32	1	1
1:A:79:PHE:CD1	1:A:99:VAL:CG2	0.60	2.85	18	4
1:A:11:PHE:HE2	1:A:44:LEU:HD13	0.59	1.54	3	3
1:A:71:VAL:HG12	1:A:75:GLY:HA2	0.59	1.74	1	2
1:A:17:ALA:HB1	1:A:115:LEU:HD21	0.59	1.72	6	4
1:A:94:VAL:HG12	1:A:116:PHE:CE2	0.59	2.31	8	2
1:A:71:VAL:HG22	1:A:77:MET:SD	0.59	2.37	17	3
1:A:24:PHE:CD1	1:A:27:LEU:HD12	0.59	2.33	11	2
1:A:80:PHE:O	1:A:80:PHE:CD1	0.59	2.56	1	5
1:A:17:ALA:N	1:A:97:THR:HG23	0.59	2.13	20	1
1:A:98:ALA:HB3	1:A:112:PRO:HB3	0.59	1.75	17	2
1:A:63:ASN:O	1:A:65:VAL:HG23	0.59	1.98	14	15
1:A:91:LEU:CD2	1:A:116:PHE:CE1	0.58	2.86	18	4
1:A:27:LEU:O	1:A:28:THR:HG22	0.58	1.98	11	1
1:A:69:TYR:CZ	1:A:143:ALA:HB2	0.58	2.32	2	1
1:A:24:PHE:CE1	1:A:36:GLN:CD	0.58	2.77	19	1
1:A:17:ALA:CA	1:A:115:LEU:HD21	0.58	2.27	5	4
1:A:27:LEU:O	1:A:28:THR:CB	0.58	2.51	11	1
1:A:80:PHE:CD1	1:A:80:PHE:O	0.58	2.56	9	3
1:A:104:ALA:CA	1:A:144:THR:HG22	0.58	2.28	7	3
1:A:24:PHE:CD2	1:A:119:LEU:HD22	0.57	2.34	14	3
1:A:78:HIS:O	1:A:80:PHE:CE2	0.57	2.57	16	1
1:A:15:VAL:HG13	1:A:20:LEU:HD21	0.57	1.75	4	4
1:A:136:LEU:O	1:A:139:ALA:HB3	0.57	1.99	13	12
1:A:104:ALA:HB1	1:A:144:THR:CG2	0.57	2.30	11	5
1:A:17:ALA:N	1:A:97:THR:CG2	0.57	2.68	20	13
1:A:47:LEU:HD13	1:A:82:ASP:OD1	0.57	1.99	4	1
1:A:91:LEU:HD23	1:A:116:PHE:HE1	0.56	1.57	16	2
1:A:94:VAL:HG12	1:A:116:PHE:CZ	0.56	2.34	13	2
1:A:95:LEU:CD2	1:A:140:ILE:HD11	0.56	2.18	3	2
1:A:108:GLN:NE2	1:A:148:LEU:HD12	0.56	2.14	11	1
1:A:24:PHE:HD2	1:A:119:LEU:HD22	0.56	1.61	7	3
1:A:99:VAL:HG11	1:A:140:ILE:HD13	0.56	1.78	3	2
1:A:58:ILE:CB	1:A:65:VAL:HG13	0.56	2.29	10	1
1:A:11:PHE:CD2	1:A:96:LEU:HD22	0.55	2.36	1	1

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:55:ALA:HB1	1:A:67:LEU:O	0.55	2.01	16	4
1:A:9:HIS:CB	1:A:11:PHE:CZ	0.55	2.89	6	2
1:A:98:ALA:HA	1:A:115:LEU:HD23	0.55	1.78	19	1
1:A:61:CYS:SG	1:A:65:VAL:HG11	0.55	2.42	10	1
1:A:71:VAL:HG22	1:A:77:MET:CE	0.55	2.31	17	1
1:A:71:VAL:HG21	1:A:147:VAL:CG2	0.55	2.32	17	2
1:A:57:GLU:OE1	1:A:66:TRP:CE2	0.55	2.59	5	1
1:A:92:LEU:C	1:A:96:LEU:HD12	0.55	2.21	16	4
1:A:90:GLY:O	1:A:93:ALA:HB3	0.55	2.00	11	6
1:A:68:GLY:O	1:A:80:PHE:CD1	0.55	2.60	10	2
1:A:133:LEU:HD12	1:A:133:LEU:C	0.54	2.22	18	1
1:A:148:LEU:HD23	1:A:148:LEU:N	0.54	2.17	13	1
1:A:11:PHE:CD2	1:A:96:LEU:CD1	0.54	2.90	8	1
1:A:61:CYS:SG	1:A:136:LEU:HD11	0.54	2.42	2	2
1:A:58:ILE:CG1	1:A:65:VAL:O	0.53	2.56	15	2
1:A:116:PHE:CE1	1:A:133:LEU:HD11	0.53	2.38	11	1
1:A:94:VAL:HG21	1:A:121:LEU:HD11	0.53	1.79	14	4
1:A:11:PHE:CE1	1:A:93:ALA:HB1	0.53	2.37	13	3
1:A:44:LEU:CD2	1:A:92:LEU:HD21	0.53	2.33	7	1
1:A:79:PHE:O	1:A:96:LEU:HD22	0.53	2.03	8	1
1:A:11:PHE:HA	1:A:15:VAL:HG23	0.53	1.80	18	1
1:A:21:ARG:CB	1:A:119:LEU:CD2	0.53	2.87	6	1
1:A:94:VAL:CG1	1:A:116:PHE:CE1	0.53	2.91	18	3
1:A:17:ALA:CB	1:A:115:LEU:CD2	0.53	2.86	13	1
1:A:37:LEU:HD23	1:A:40:LEU:CD1	0.52	2.34	10	1
1:A:30:TRP:CH2	1:A:120:GLY:O	0.52	2.62	20	1
1:A:24:PHE:HE2	1:A:121:LEU:HD11	0.52	1.61	1	2
1:A:116:PHE:CD1	1:A:133:LEU:HD11	0.52	2.39	11	1
1:A:11:PHE:N	1:A:11:PHE:CD1	0.52	2.76	3	5
1:A:25:ALA:N	1:A:26:PRO:CD	0.52	2.73	9	20
1:A:24:PHE:CE1	1:A:36:GLN:OE1	0.52	2.63	19	2
1:A:11:PHE:CD1	1:A:96:LEU:HB3	0.51	2.40	2	5
1:A:51:LEU:CD2	1:A:51:LEU:N	0.51	2.73	9	2
1:A:9:HIS:CE1	1:A:44:LEU:HD11	0.51	2.41	5	1
1:A:79:PHE:CE1	1:A:107:LEU:CD1	0.51	2.93	14	2
1:A:11:PHE:CZ	1:A:93:ALA:CB	0.51	2.92	13	1
1:A:11:PHE:CE1	1:A:96:LEU:HD22	0.51	2.39	11	3
1:A:30:TRP:CE3	1:A:120:GLY:O	0.51	2.63	20	1
1:A:30:TRP:CH2	1:A:121:LEU:HA	0.51	2.39	20	1
1:A:27:LEU:O	1:A:28:THR:CG2	0.51	2.58	11	1
1:A:94:VAL:HG21	1:A:121:LEU:HD13	0.51	1.82	1	1

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:79:PHE:O	1:A:96:LEU:HD23	0.51	2.05	7	4
1:A:17:ALA:HB2	1:A:115:LEU:CD2	0.51	2.35	13	2
1:A:94:VAL:HG13	1:A:115:LEU:HD23	0.51	1.82	11	1
1:A:67:LEU:HD13	1:A:80:PHE:O	0.51	2.05	14	2
1:A:15:VAL:CG1	1:A:15:VAL:O	0.51	2.59	6	1
1:A:64:ARG:HD2	1:A:66:TRP:CZ2	0.51	2.41	8	2
1:A:92:LEU:HD21	1:A:96:LEU:CD1	0.51	2.36	6	1
1:A:94:VAL:HG12	1:A:116:PHE:CE1	0.51	2.41	3	4
1:A:69:TYR:CD1	1:A:77:MET:CE	0.51	2.94	14	1
1:A:69:TYR:O	1:A:70:THR:CG2	0.51	2.59	6	10
1:A:16:THR:OG1	1:A:17:ALA:N	0.51	2.44	20	2
1:A:40:LEU:CD1	1:A:93:ALA:CB	0.51	2.89	20	2
1:A:91:LEU:HD13	1:A:122:ARG:HE	0.51	1.66	2	1
1:A:77:MET:SD	1:A:79:PHE:CE1	0.51	3.04	3	2
1:A:122:ARG:CG	1:A:122:ARG:O	0.50	2.60	17	2
1:A:87:ILE:HG23	1:A:88:VAL:N	0.50	2.22	1	3
1:A:80:PHE:O	1:A:80:PHE:CD2	0.50	2.64	11	2
1:A:11:PHE:CE2	1:A:44:LEU:HD12	0.50	2.41	16	1
1:A:9:HIS:NE2	1:A:47:LEU:CD1	0.50	2.74	16	1
1:A:21:ARG:CB	1:A:119:LEU:HD21	0.50	2.35	9	1
1:A:79:PHE:CD1	1:A:99:VAL:HB	0.50	2.42	12	2
1:A:34:TYR:CD1	1:A:87:ILE:CD1	0.50	2.94	3	2
1:A:16:THR:O	1:A:20:LEU:CG	0.50	2.59	9	1
1:A:11:PHE:HE2	1:A:44:LEU:HD12	0.50	1.67	16	1
1:A:66:TRP:O	1:A:81:GLY:CA	0.50	2.60	4	2
1:A:58:ILE:N	1:A:65:VAL:O	0.50	2.45	7	7
1:A:79:PHE:HB2	1:A:99:VAL:HG21	0.50	1.82	12	3
1:A:37:LEU:HD11	1:A:121:LEU:HB3	0.50	1.83	11	1
1:A:69:TYR:CZ	1:A:143:ALA:CB	0.50	2.95	13	4
1:A:69:TYR:OH	1:A:143:ALA:CB	0.50	2.60	19	5
1:A:9:HIS:CG	1:A:11:PHE:CZ	0.50	2.99	8	1
1:A:68:GLY:HA3	1:A:80:PHE:CE1	0.50	2.41	19	3
1:A:11:PHE:CD1	1:A:11:PHE:O	0.50	2.65	9	2
1:A:94:VAL:HG11	1:A:116:PHE:CD1	0.50	2.42	15	2
1:A:9:HIS:HB2	1:A:11:PHE:CE2	0.49	2.42	1	2
1:A:89:ARG:O	1:A:92:LEU:CD2	0.49	2.60	7	2
1:A:30:TRP:CZ2	1:A:34:TYR:CE1	0.49	2.99	7	1
1:A:58:ILE:HG22	1:A:59:ALA:H	0.49	1.67	19	1
1:A:80:PHE:C	1:A:80:PHE:CD1	0.49	2.85	3	2
1:A:21:ARG:HG2	1:A:119:LEU:HD21	0.49	1.82	20	1
1:A:10:PRO:O	1:A:11:PHE:CD1	0.49	2.64	16	1

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:11:PHE:CD2	1:A:93:ALA:HA	0.49	2.43	10	3
1:A:21:ARG:O	1:A:25:ALA:N	0.49	2.46	16	16
1:A:65:VAL:HG13	1:A:83:SER:HB2	0.49	1.84	19	1
1:A:134:ASN:O	1:A:138:GLU:CG	0.49	2.60	8	3
1:A:141:ILE:HD13	1:A:141:ILE:N	0.49	2.21	2	1
1:A:24:PHE:CD1	1:A:33:LYS:HG2	0.49	2.43	8	7
1:A:65:VAL:CG1	1:A:136:LEU:HD21	0.49	2.36	18	1
1:A:68:GLY:HA3	1:A:80:PHE:CE2	0.49	2.43	10	2
1:A:40:LEU:HD12	1:A:93:ALA:HB2	0.49	1.85	20	1
1:A:10:PRO:HB2	1:A:15:VAL:HG22	0.49	1.84	18	1
1:A:9:HIS:CE1	1:A:80:PHE:HB3	0.49	2.42	18	1
1:A:47:LEU:HD23	1:A:82:ASP:OD2	0.48	2.07	2	1
1:A:11:PHE:CE1	1:A:96:LEU:CD2	0.48	2.96	11	1
1:A:108:GLN:HG2	1:A:141:ILE:HD12	0.48	1.84	4	1
1:A:40:LEU:HD22	1:A:93:ALA:CB	0.48	2.37	1	2
1:A:69:TYR:CD1	1:A:77:MET:SD	0.48	3.06	20	1
1:A:14:THR:O	1:A:19:THR:HG21	0.48	2.07	20	1
1:A:10:PRO:O	1:A:15:VAL:HG22	0.48	2.07	5	1
1:A:79:PHE:CE1	1:A:99:VAL:HB	0.48	2.43	10	2
1:A:64:ARG:HB3	1:A:66:TRP:CZ3	0.48	2.43	8	8
1:A:9:HIS:HB2	1:A:11:PHE:CE1	0.48	2.43	2	3
1:A:64:ARG:HD2	1:A:66:TRP:CH2	0.48	2.43	7	1
1:A:18:GLU:O	1:A:21:ARG:CG	0.48	2.61	17	2
1:A:21:ARG:HG3	1:A:119:LEU:HD23	0.48	1.85	19	2
1:A:26:PRO:O	1:A:28:THR:N	0.48	2.47	9	4
1:A:87:ILE:HG23	1:A:88:VAL:H	0.48	1.68	2	1
1:A:9:HIS:HB3	1:A:11:PHE:CZ	0.48	2.43	2	2
1:A:82:ASP:N	1:A:82:ASP:OD1	0.48	2.47	5	4
1:A:79:PHE:HZ	1:A:140:ILE:HG23	0.48	1.68	10	1
1:A:11:PHE:CD2	1:A:93:ALA:CB	0.48	2.97	4	1
1:A:69:TYR:C	1:A:69:TYR:CD1	0.48	2.87	20	1
1:A:64:ARG:CD	1:A:66:TRP:CH2	0.48	2.97	16	3
1:A:64:ARG:HG3	1:A:66:TRP:CZ3	0.48	2.43	18	1
1:A:92:LEU:O	1:A:96:LEU:CD1	0.47	2.62	14	3
1:A:21:ARG:CG	1:A:119:LEU:HD23	0.47	2.38	13	2
1:A:29:GLN:N	1:A:29:GLN:CD	0.47	2.67	10	2
1:A:115:LEU:HD23	1:A:119:LEU:HD12	0.47	1.86	20	1
1:A:98:ALA:O	1:A:102:LYS:CE	0.47	2.63	1	2
1:A:134:ASN:OD1	1:A:135:ALA:N	0.47	2.47	2	3
1:A:68:GLY:O	1:A:80:PHE:N	0.47	2.47	17	4
1:A:92:LEU:O	1:A:95:LEU:N	0.47	2.47	13	3

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:117:ASP:CG	1:A:118:GLU:N	0.47	2.67	8	1
1:A:100:GLU:CG	1:A:100:GLU:O	0.47	2.63	17	1
1:A:91:LEU:HD21	1:A:122:ARG:HD2	0.47	1.85	15	1
1:A:9:HIS:CE1	1:A:80:PHE:HB2	0.47	2.44	16	1
1:A:95:LEU:HD11	1:A:140:ILE:HD11	0.47	1.87	13	1
1:A:50:GLU:O	1:A:54:GLN:NE2	0.47	2.48	3	17
1:A:116:PHE:O	1:A:120:GLY:N	0.47	2.48	5	8
1:A:87:ILE:CG2	1:A:88:VAL:N	0.47	2.77	4	7
1:A:68:GLY:C	1:A:80:PHE:CZ	0.47	2.88	19	2
1:A:31:GLU:CG	1:A:32:ASP:N	0.47	2.77	14	1
1:A:44:LEU:HD12	1:A:45:PRO:HD2	0.47	1.87	14	1
1:A:91:LEU:HD23	1:A:116:PHE:CD1	0.47	2.45	11	1
1:A:106:GLU:O	1:A:110:GLN:N	0.47	2.48	16	4
1:A:16:THR:O	1:A:20:LEU:CD1	0.47	2.62	9	1
1:A:115:LEU:HD23	1:A:119:LEU:CD1	0.47	2.40	20	2
1:A:116:PHE:CD1	1:A:133:LEU:HD21	0.47	2.45	7	1
1:A:47:LEU:HD23	1:A:82:ASP:CG	0.47	2.30	2	2
1:A:29:GLN:O	1:A:30:TRP:C	0.47	2.53	11	1
1:A:64:ARG:HG3	1:A:66:TRP:CH2	0.47	2.45	16	1
1:A:10:PRO:O	1:A:11:PHE:C	0.47	2.52	18	2
1:A:75:GLY:O	1:A:77:MET:N	0.47	2.48	9	4
1:A:47:LEU:CD2	1:A:82:ASP:OD1	0.46	2.63	19	3
1:A:11:PHE:CE2	1:A:96:LEU:HD22	0.46	2.45	1	1
1:A:140:ILE:O	1:A:143:ALA:N	0.46	2.49	1	1
1:A:110:GLN:O	1:A:110:GLN:CG	0.46	2.63	14	1
1:A:100:GLU:N	1:A:100:GLU:OE1	0.46	2.49	11	1
1:A:47:LEU:CD2	1:A:82:ASP:CG	0.46	2.83	19	1
1:A:28:THR:HG22	1:A:29:GLN:OE1	0.46	2.10	18	1
1:A:47:LEU:CD1	1:A:82:ASP:OD1	0.46	2.63	4	1
1:A:11:PHE:CE1	1:A:93:ALA:HA	0.46	2.46	1	1
1:A:13:THR:HG22	1:A:14:THR:N	0.46	2.26	13	2
1:A:11:PHE:CG	1:A:93:ALA:HA	0.46	2.45	14	1
1:A:15:VAL:O	1:A:15:VAL:HG23	0.46	2.11	15	1
1:A:52:LYS:HG2	1:A:66:TRP:CD1	0.46	2.46	4	1
1:A:98:ALA:HB2	1:A:115:LEU:HD13	0.46	1.86	15	1
1:A:20:LEU:HD13	1:A:94:VAL:HG22	0.46	1.88	2	2
1:A:134:ASN:C	1:A:134:ASN:ND2	0.46	2.70	12	1
1:A:17:ALA:HB2	1:A:115:LEU:CG	0.46	2.41	13	1
1:A:69:TYR:HA	1:A:80:PHE:CE2	0.46	2.46	13	2
1:A:30:TRP:CZ3	1:A:121:LEU:HA	0.46	2.45	20	1
1:A:58:ILE:O	1:A:58:ILE:HG22	0.46	2.11	16	1

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:92:LEU:HD21	1:A:96:LEU:HD11	0.46	1.88	6	1
1:A:36:GLN:O	1:A:39:MET:N	0.46	2.49	13	3
1:A:116:PHE:O	1:A:121:LEU:N	0.45	2.48	5	2
1:A:11:PHE:CD1	1:A:96:LEU:CB	0.45	2.99	2	1
1:A:56:LYS:N	1:A:67:LEU:O	0.45	2.45	8	10
1:A:57:GLU:OE1	1:A:57:GLU:CA	0.45	2.64	6	1
1:A:114:ALA:O	1:A:117:ASP:N	0.45	2.50	8	1
1:A:65:VAL:HG22	1:A:66:TRP:N	0.45	2.26	10	1
1:A:105:ALA:O	1:A:108:GLN:N	0.45	2.50	14	2
1:A:20:LEU:O	1:A:24:PHE:CD2	0.45	2.69	18	1
1:A:10:PRO:HB2	1:A:15:VAL:HG23	0.45	1.87	19	1
1:A:30:TRP:CH2	1:A:34:TYR:CE2	0.45	3.04	19	1
1:A:15:VAL:O	1:A:97:THR:CG2	0.45	2.64	1	1
1:A:95:LEU:O	1:A:98:ALA:N	0.45	2.49	6	3
1:A:94:VAL:CG1	1:A:116:PHE:CZ	0.45	2.99	13	1
1:A:11:PHE:CE2	1:A:93:ALA:CB	0.45	2.99	13	1
1:A:137:SER:O	1:A:140:ILE:N	0.45	2.49	15	6
1:A:99:VAL:O	1:A:101:GLY:N	0.45	2.49	13	6
1:A:32:ASP:O	1:A:35:ARG:N	0.45	2.49	2	4
1:A:10:PRO:O	1:A:12:GLY:N	0.45	2.50	2	3
1:A:29:GLN:O	1:A:32:ASP:N	0.45	2.49	11	3
1:A:37:LEU:HG	1:A:121:LEU:HD22	0.45	1.89	11	1
1:A:11:PHE:CE1	1:A:93:ALA:HB2	0.45	2.46	18	1
1:A:49:ASP:O	1:A:52:LYS:N	0.45	2.50	11	2
1:A:68:GLY:O	1:A:80:PHE:CG	0.45	2.69	13	1
1:A:60:GLY:O	1:A:135:ALA:CB	0.45	2.65	3	1
1:A:81:GLY:O	1:A:92:LEU:HD21	0.45	2.12	3	1
1:A:79:PHE:CG	1:A:99:VAL:HG21	0.45	2.46	6	1
1:A:30:TRP:NE1	1:A:121:LEU:O	0.45	2.49	4	1
1:A:79:PHE:CE2	1:A:140:ILE:HD12	0.45	2.47	16	1
1:A:23:THR:O	1:A:27:LEU:HD12	0.45	2.11	8	1
1:A:79:PHE:O	1:A:96:LEU:CD1	0.45	2.64	13	1
1:A:98:ALA:HB2	1:A:115:LEU:HB2	0.45	1.87	19	1
1:A:135:ALA:O	1:A:138:GLU:CG	0.45	2.65	14	1
1:A:133:LEU:O	1:A:136:LEU:N	0.45	2.50	17	2
1:A:86:ARG:O	1:A:89:ARG:CB	0.44	2.65	15	1
1:A:98:ALA:CA	1:A:115:LEU:HD23	0.44	2.42	19	1
1:A:18:GLU:O	1:A:21:ARG:N	0.44	2.49	19	6
1:A:85:GLY:O	1:A:89:ARG:N	0.44	2.50	11	3
1:A:116:PHE:CD2	1:A:121:LEU:HD12	0.44	2.46	14	1
1:A:9:HIS:HB2	1:A:44:LEU:HD12	0.44	1.89	17	1

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:92:LEU:O	1:A:96:LEU:CD2	0.44	2.65	12	2
1:A:113:LEU:O	1:A:116:PHE:N	0.44	2.49	12	1
1:A:83:SER:O	1:A:89:ARG:NH1	0.44	2.51	14	1
1:A:79:PHE:CZ	1:A:140:ILE:CG2	0.44	2.97	17	1
1:A:52:LYS:HD3	1:A:66:TRP:CZ3	0.44	2.47	18	1
1:A:15:VAL:O	1:A:97:THR:HG23	0.44	2.12	1	1
1:A:24:PHE:CD1	1:A:33:LYS:CG	0.44	3.00	8	1
1:A:69:TYR:CD1	1:A:69:TYR:C	0.44	2.91	11	2
1:A:24:PHE:CD1	1:A:33:LYS:HG3	0.44	2.48	1	3
1:A:69:TYR:C	1:A:70:THR:HG23	0.44	2.33	18	5
1:A:15:VAL:CG1	1:A:20:LEU:HD21	0.44	2.43	12	2
1:A:94:VAL:HG13	1:A:115:LEU:HB3	0.44	1.90	16	1
1:A:41:GLY:O	1:A:44:LEU:N	0.44	2.50	12	3
1:A:27:LEU:O	1:A:28:THR:HB	0.44	2.13	11	1
1:A:94:VAL:HG11	1:A:116:PHE:CE1	0.44	2.48	15	2
1:A:92:LEU:HG	1:A:96:LEU:CD1	0.44	2.42	18	3
1:A:62:GLU:O	1:A:63:ASN:ND2	0.44	2.51	2	1
1:A:100:GLU:O	1:A:101:GLY:C	0.43	2.56	11	5
1:A:66:TRP:O	1:A:81:GLY:HA3	0.43	2.13	3	1
1:A:96:LEU:HA	1:A:99:VAL:HG22	0.43	1.88	13	3
1:A:68:GLY:N	1:A:80:PHE:O	0.43	2.50	10	1
1:A:10:PRO:O	1:A:11:PHE:O	0.43	2.36	1	2
1:A:68:GLY:HA3	1:A:80:PHE:CZ	0.43	2.48	8	1
1:A:92:LEU:O	1:A:96:LEU:HD13	0.43	2.13	14	1
1:A:52:LYS:HG2	1:A:66:TRP:CG	0.43	2.49	4	2
1:A:37:LEU:HD23	1:A:40:LEU:HD13	0.43	1.88	5	2
1:A:91:LEU:CD2	1:A:116:PHE:CE2	0.43	3.01	20	1
1:A:113:LEU:HD21	1:A:133:LEU:HD22	0.43	1.88	17	1
1:A:61:CYS:O	1:A:62:GLU:CG	0.43	2.66	20	2
1:A:30:TRP:CZ2	1:A:120:GLY:O	0.43	2.72	13	1
1:A:51:LEU:N	1:A:51:LEU:CD2	0.43	2.81	20	2
1:A:100:GLU:O	1:A:100:GLU:OE1	0.43	2.37	11	1
1:A:21:ARG:O	1:A:25:ALA:CB	0.43	2.66	5	1
1:A:116:PHE:CZ	1:A:133:LEU:HD21	0.43	2.48	16	1
1:A:52:LYS:HD3	1:A:66:TRP:CD2	0.43	2.48	20	2
1:A:94:VAL:HG13	1:A:115:LEU:HD22	0.43	1.90	17	1
1:A:108:GLN:CD	1:A:148:LEU:HD12	0.43	2.34	16	1
1:A:55:ALA:HB1	1:A:67:LEU:N	0.43	2.29	16	1
1:A:87:ILE:C	1:A:91:LEU:HD12	0.43	2.34	4	1
1:A:106:GLU:O	1:A:109:ALA:HB3	0.43	2.14	6	1
1:A:51:LEU:O	1:A:54:GLN:N	0.43	2.50	8	1

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:52:LYS:HD3	1:A:66:TRP:CH2	0.43	2.49	18	1
1:A:11:PHE:CG	1:A:96:LEU:HB3	0.43	2.49	6	1
1:A:34:TYR:O	1:A:38:ILE:CD1	0.43	2.67	13	1
1:A:24:PHE:HD1	1:A:27:LEU:HD12	0.43	1.73	9	1
1:A:104:ALA:HA	1:A:144:THR:CG2	0.43	2.43	5	1
1:A:71:VAL:HG22	1:A:77:MET:HG2	0.43	1.90	5	1
1:A:95:LEU:HD23	1:A:95:LEU:C	0.43	2.34	17	2
1:A:24:PHE:O	1:A:25:ALA:C	0.42	2.58	11	14
1:A:68:GLY:C	1:A:80:PHE:CE2	0.42	2.92	20	2
1:A:11:PHE:CE2	1:A:93:ALA:HB1	0.42	2.49	13	1
1:A:92:LEU:CD2	1:A:96:LEU:CD1	0.42	2.96	6	1
1:A:68:GLY:O	1:A:80:PHE:CE2	0.42	2.72	19	2
1:A:58:ILE:O	1:A:65:VAL:N	0.42	2.51	5	1
1:A:65:VAL:C	1:A:66:TRP:CE3	0.42	2.93	10	1
1:A:63:ASN:O	1:A:64:ARG:C	0.42	2.58	12	6
1:A:61:CYS:O	1:A:62:GLU:CB	0.42	2.67	11	1
1:A:93:ALA:O	1:A:96:LEU:N	0.42	2.53	7	1
1:A:24:PHE:O	1:A:27:LEU:N	0.42	2.52	11	1
1:A:11:PHE:CZ	1:A:96:LEU:HD13	0.42	2.49	8	1
1:A:93:ALA:O	1:A:94:VAL:C	0.42	2.58	7	4
1:A:64:ARG:CD	1:A:66:TRP:CZ2	0.42	3.02	7	1
1:A:114:ALA:O	1:A:115:LEU:C	0.42	2.58	20	4
1:A:116:PHE:CE1	1:A:133:LEU:HD21	0.42	2.50	7	1
1:A:113:LEU:HD21	1:A:137:SER:CB	0.42	2.44	11	1
1:A:108:GLN:OE1	1:A:148:LEU:HD12	0.42	2.15	5	1
1:A:62:GLU:HB2	1:A:88:VAL:HG21	0.42	1.89	4	1
1:A:88:VAL:HA	1:A:91:LEU:HD12	0.42	1.92	1	2
1:A:81:GLY:O	1:A:82:ASP:CG	0.42	2.58	6	1
1:A:24:PHE:CZ	1:A:121:LEU:HD21	0.42	2.50	11	1
1:A:98:ALA:CB	1:A:112:PRO:HA	0.42	2.45	16	1
1:A:47:LEU:HD12	1:A:51:LEU:CB	0.42	2.45	6	1
1:A:11:PHE:CG	1:A:96:LEU:HD13	0.42	2.49	8	1
1:A:107:LEU:O	1:A:110:GLN:O	0.42	2.38	17	5
1:A:30:TRP:CD2	1:A:120:GLY:O	0.42	2.73	20	1
1:A:23:THR:CG2	1:A:36:GLN:OE1	0.42	2.66	18	1
1:A:134:ASN:ND2	1:A:135:ALA:N	0.42	2.68	12	1
1:A:15:VAL:HG13	1:A:20:LEU:CD2	0.42	2.45	4	2
1:A:81:GLY:C	1:A:82:ASP:OD1	0.41	2.58	6	1
1:A:18:GLU:O	1:A:22:ASN:N	0.41	2.50	18	2
1:A:92:LEU:O	1:A:93:ALA:C	0.41	2.57	12	5
1:A:96:LEU:N	1:A:96:LEU:HD22	0.41	2.30	13	1

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:30:TRP:C	1:A:32:ASP:N	0.41	2.72	9	1
1:A:51:LEU:N	1:A:51:LEU:HD23	0.41	2.29	9	1
1:A:91:LEU:HD22	1:A:133:LEU:HD21	0.41	1.91	11	1
1:A:9:HIS:CD2	1:A:11:PHE:CD2	0.41	3.08	12	2
1:A:61:CYS:O	1:A:62:GLU:C	0.41	2.58	6	1
1:A:71:VAL:CG1	1:A:75:GLY:O	0.41	2.65	8	1
1:A:11:PHE:CB	1:A:96:LEU:HB2	0.41	2.45	8	1
1:A:65:VAL:CG2	1:A:66:TRP:N	0.41	2.83	10	1
1:A:65:VAL:HG13	1:A:82:ASP:O	0.41	2.16	2	1
1:A:61:CYS:O	1:A:63:ASN:N	0.41	2.52	15	1
1:A:116:PHE:CG	1:A:133:LEU:HD11	0.41	2.50	16	1
1:A:69:TYR:OH	1:A:143:ALA:HB1	0.41	2.15	13	2
1:A:76:LYS:CD	1:A:101:GLY:O	0.41	2.68	10	1
1:A:84:GLU:C	1:A:84:GLU:CD	0.41	2.78	2	1
1:A:134:ASN:OD1	1:A:134:ASN:C	0.41	2.58	18	1
1:A:20:LEU:HD22	1:A:94:VAL:HG22	0.41	1.91	5	1
1:A:47:LEU:CD1	1:A:51:LEU:HB3	0.41	2.45	6	1
1:A:9:HIS:HB3	1:A:11:PHE:CE1	0.41	2.49	8	1
1:A:29:GLN:C	1:A:31:GLU:N	0.41	2.73	2	1
1:A:55:ALA:CB	1:A:67:LEU:O	0.41	2.68	16	1
1:A:81:GLY:O	1:A:82:ASP:OD1	0.41	2.39	10	2
1:A:48:PRO:O	1:A:51:LEU:N	0.41	2.51	5	1
1:A:82:ASP:CG	1:A:82:ASP:O	0.41	2.59	19	1
1:A:94:VAL:O	1:A:98:ALA:N	0.41	2.50	16	1
1:A:69:TYR:CE2	1:A:143:ALA:CB	0.41	3.04	13	1
1:A:17:ALA:N	1:A:97:THR:HG21	0.41	2.30	9	1
1:A:63:ASN:CG	1:A:84:GLU:OE2	0.41	2.59	20	1
1:A:69:TYR:CE1	1:A:143:ALA:HB1	0.41	2.51	17	1
1:A:40:LEU:HA	1:A:40:LEU:HD22	0.41	1.80	18	1
1:A:79:PHE:O	1:A:96:LEU:CD2	0.41	2.68	18	1
1:A:113:LEU:C	1:A:115:LEU:N	0.41	2.72	12	1
1:A:79:PHE:CZ	1:A:107:LEU:CD1	0.41	3.03	4	1
1:A:11:PHE:O	1:A:11:PHE:CD1	0.41	2.73	7	2
1:A:63:ASN:CB	1:A:84:GLU:CG	0.41	2.99	20	1
1:A:79:PHE:C	1:A:96:LEU:HD12	0.41	2.36	20	1
1:A:52:LYS:HD3	1:A:66:TRP:CE2	0.41	2.50	14	1
1:A:92:LEU:CD1	1:A:96:LEU:CD1	0.41	2.99	11	1
1:A:116:PHE:CD2	1:A:133:LEU:HD21	0.41	2.50	16	1
1:A:21:ARG:HB3	1:A:119:LEU:CD2	0.41	2.46	8	1
1:A:25:ALA:N	1:A:26:PRO:HD2	0.41	2.31	9	1
1:A:30:TRP:O	1:A:31:GLU:C	0.41	2.59	7	1

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:58:ILE:HG22	1:A:59:ALA:N	0.41	2.30	19	1
1:A:97:THR:O	1:A:100:GLU:OE2	0.41	2.39	11	1
1:A:41:GLY:O	1:A:42:LYS:C	0.41	2.59	4	2
1:A:93:ALA:O	1:A:97:THR:N	0.40	2.49	16	2
1:A:37:LEU:CG	1:A:121:LEU:HD22	0.40	2.46	11	1
1:A:113:LEU:O	1:A:114:ALA:C	0.40	2.59	12	1
1:A:29:GLN:N	1:A:29:GLN:NE2	0.40	2.69	9	1
1:A:100:GLU:CD	1:A:100:GLU:O	0.40	2.60	10	1
1:A:21:ARG:HG3	1:A:119:LEU:HD21	0.40	1.91	20	1
1:A:61:CYS:C	1:A:63:ASN:N	0.40	2.73	15	1
1:A:9:HIS:NE2	1:A:47:LEU:HD12	0.40	2.30	16	1
1:A:103:THR:O	1:A:104:ALA:C	0.40	2.58	1	1
1:A:13:THR:O	1:A:16:THR:OG1	0.40	2.40	3	1
1:A:29:GLN:O	1:A:32:ASP:CG	0.40	2.60	9	1
1:A:82:ASP:HA	1:A:92:LEU:CD1	0.40	2.46	14	1
1:A:16:THR:C	1:A:18:GLU:N	0.40	2.75	2	1
1:A:48:PRO:HG2	1:A:51:LEU:HD12	0.40	1.93	17	1
1:A:79:PHE:HE1	1:A:107:LEU:HD11	0.40	1.75	3	1
1:A:52:LYS:HD3	1:A:66:TRP:CZ2	0.40	2.52	14	1
1:A:91:LEU:HD22	1:A:122:ARG:HD2	0.40	1.93	2	1
1:A:71:VAL:HG21	1:A:147:VAL:HG21	0.40	1.92	17	1
1:A:32:ASP:O	1:A:36:GLN:N	0.40	2.51	11	1
1:A:58:ILE:CB	1:A:65:VAL:O	0.40	2.70	15	1

6.3 Torsion angles (i)

6.3.1 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 PDB entries followed by that with respect to all NMR entries. The Analysed column shows the number of residues for which the backbone conformation was analysed and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	130/155 (84%)	109±2 (84±2%)	18±3 (14±2%)	4±1 (3±1%)	8	42
All	All	2600/3100 (84%)	2173 (84%)	351 (14%)	76 (3%)	8	42

All 13 unique Ramachandran outliers are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	100	GLU	16
1	A	76	LYS	14
1	A	27	LEU	9
1	A	101	GLY	7
1	A	62	GLU	6
1	A	9	HIS	5
1	A	12	GLY	4
1	A	11	PHE	4
1	A	60	GLY	3
1	A	64	ARG	3
1	A	13	THR	2
1	A	10	PRO	2
1	A	122	ARG	1

6.3.2 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 PDB entries followed by that with respect to all NMR entries. The Analysed column shows the number of residues for which the sidechain conformation was analysed and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	A	104/123 (85%)	77±3 (74±3%)	27±3 (26±3%)	2 23
All	All	2080/2460 (85%)	1535 (74%)	545 (26%)	2 23

All 71 unique residues with a non-rotameric sidechain are listed below. They are sorted by the frequency of occurrence in the ensemble.

Mol	Chain	Res	Type	Models (Total)
1	A	118	GLU	20
1	A	106	GLU	20
1	A	40	LEU	20
1	A	115	LEU	20
1	A	133	LEU	18
1	A	51	LEU	18
1	A	146	GLN	18
1	A	67	LEU	17
1	A	149	GLU	16
1	A	35	ARG	16
1	A	21	ARG	15
1	A	76	LYS	15
1	A	16	THR	15

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Models (Total)
1	A	86	ARG	14
1	A	34	TYR	13
1	A	84	GLU	13
1	A	64	ARG	13
1	A	77	MET	12
1	A	36	GLN	12
1	A	122	ARG	11
1	A	78	HIS	10
1	A	47	LEU	10
1	A	110	GLN	9
1	A	92	LEU	9
1	A	145	LYS	9
1	A	22	ASN	9
1	A	100	GLU	9
1	A	56	LYS	9
1	A	33	LYS	9
1	A	62	GLU	8
1	A	61	CYS	8
1	A	73	GLU	8
1	A	57	GLU	8
1	A	97	THR	7
1	A	31	GLU	7
1	A	39	MET	6
1	A	49	ASP	6
1	A	50	GLU	6
1	A	89	ARG	5
1	A	29	GLN	5
1	A	43	GLN	5
1	A	87	ILE	5
1	A	102	LYS	4
1	A	32	ASP	4
1	A	74	ASN	4
1	A	71	VAL	4
1	A	52	LYS	4
1	A	44	LEU	4
1	A	82	ASP	3
1	A	91	LEU	3
1	A	20	LEU	2
1	A	95	LEU	2
1	A	83	SER	2
1	A	42	LYS	2
1	A	23	THR	2

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Models (Total)
1	A	148	LEU	2
1	A	13	THR	2
1	A	63	ASN	2
1	A	134	ASN	2
1	A	11	PHE	2
1	A	28	THR	2
1	A	14	THR	1
1	A	58	ILE	1
1	A	117	ASP	1
1	A	96	LEU	1
1	A	138	GLU	1
1	A	137	SER	1
1	A	111	SER	1
1	A	9	HIS	1
1	A	18	GLU	1
1	A	54	GLN	1

6.3.3 RNA

There are no RNA molecules in this entry.

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

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

6.5 Carbohydrates

There are no carbohydrates in this entry.

6.6 Ligand geometry

There are no ligands in this entry.

6.7 Other polymers

There are no such molecules in this entry.

6.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

7 Chemical shift validation

No chemical shift data were provided