WORLDWIDE PDB

PROTEIN DATA BANK

Full wwPDB NMR Structure Validation Report (i)

Oct 31, 2021 – 08:46 AM EDT

PDB ID	:	1RSO
Title	:	Hetero-tetrameric L27 (Lin-2, Lin-7) domain complexes as organization platforms of supra-molecular assemblies
Authors	:	Feng, W.; Long, J.-F.; Fan, J.-S.; Suetake, T.; Zhang, M.
Deposited on	:	2003-12-09

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
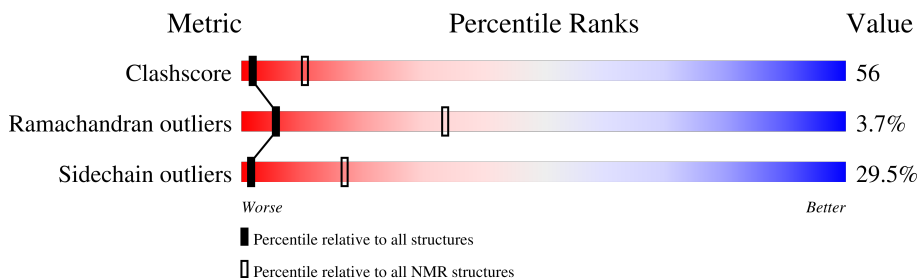with specific help available everywhere you see the (i) symbol.

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	Percentile Ranks	Value
Clashscore		56
Ramachandran outliers		3.7%
Sidechain outliers		29.5%

Worse   *Better*

■ Percentile relative to all structures

▯ Percentile relative to all NMR structures

Metric	Whole archive (#Entries)	NMR archive (#Entries)
Clashscore	158937	12864
Ramachandran outliers	154571	11451
Sidechain outliers	154315	11428

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	60	23% 62% 12% •
1	C	60	27% 57% 13% •
2	B	56	25% 57% 16% •
2	D	56	25% 52% 16% 7%

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2 Ensemble composition and analysis ⓘ

This entry contains 20 models. Model 3 is the overall representative, medoid model (most similar to other models). The authors have identified model 11 as representative, based on the following criterion: *minimized average structure*.

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:7-A:64, B:82-B:136, C:7-C:64, D:82-D:133 (223)	0.39	3

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 5 clusters. No single-model clusters were found.

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

3 Entry composition (i)

There are 2 unique types of molecules in this entry. The entry contains 3802 atoms, of which 1894 are hydrogens and 0 are deuteriums.

- Molecule 1 is a protein called Presynaptic protein SAP97.

Mol	Chain	Residues	Atoms					Trace
1	A	60	Total	C	H	N	O	0
			1019	318	510	91	100	
1	C	60	Total	C	H	N	O	0
			1019	318	510	91	100	

- Molecule 2 is a protein called Peripheral plasma membrane protein CASK.

Mol	Chain	Residues	Atoms					Trace
2	B	56	Total	C	H	N	O	0
			882	279	437	74	92	
2	D	56	Total	C	H	N	O	0
			882	279	437	74	92	

There are 2 discrepancies between the modelled and reference sequences:

| Chain	Residue	Modelled	Actual	Comment	Reference
B	105	SER	CYS	engineered mutation	UNP Q62915
D	105	SER	CYS	engineered mutation	UNP Q62915

4 Residue-property plots ⓘ

4.1 Average score per residue in the NMR ensemble

These plots are provided for all protein, RNA, DNA and oligosaccharide 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.
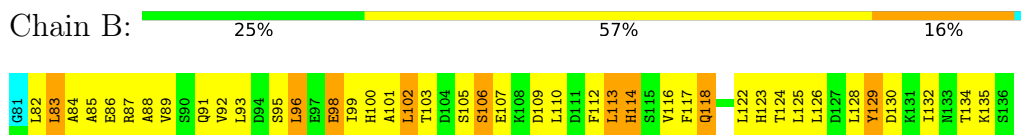
• Molecule 1: Presynaptic protein SAP97
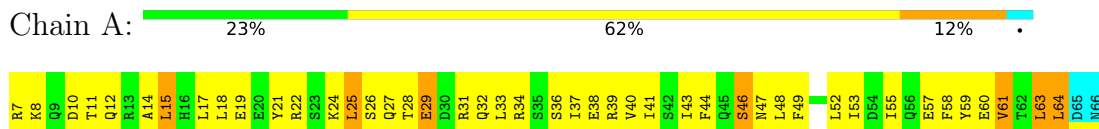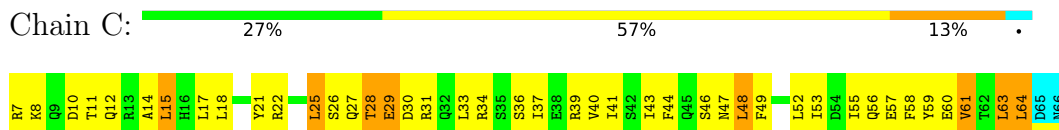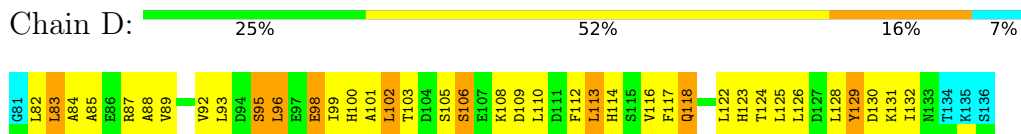
Chain A:

• Molecule 1: Presynaptic protein SAP97

Chain C:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B:

• Molecule 2: Peripheral plasma membrane protein CASK
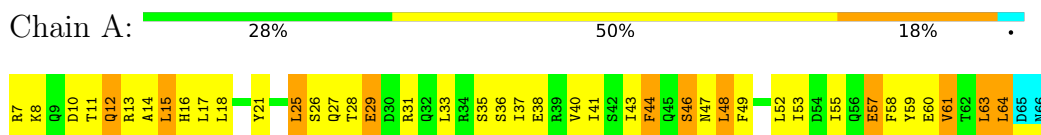
Chain D:
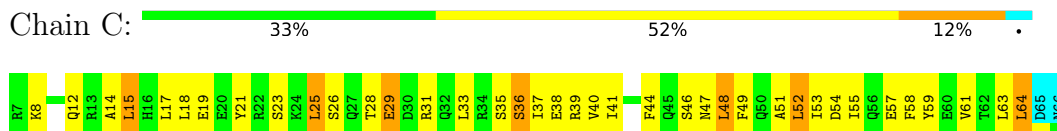

4.2 Scores per residue for each member of the ensemble

Colouring as in section 4.1 above.

4.2.1 Score per residue for model 1

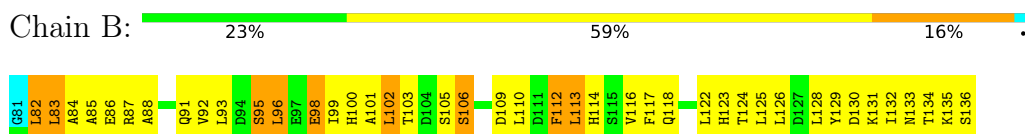• Molecule 1: Presynaptic protein SAP97

Chain A: 28% 50% 18% •

R7 K8 Q9 D10 T11 Q12 R13 A14 L15 H16 L17 L18 Y21 L25 S26 Q27 T28 E29 D30 R31 Q32 L33 R34 S35 S36 I37 E38 R39 V40 I41 S42 I43 F44 Q45 S46 N47 L48 F49 L52 I53 D54 I55 Q56 E57 F58 Y59 E60 V61 T62 L63 L64 D65 N66

• Molecule 1: Presynaptic protein SAP97

Chain C: 33% 52% 12% •

R7 K8 Q12 R13 A14 L15 H16 L17 L18 E19 E20 Y21 R22 S23 K24 L25 S26 Q27 T28 E29 D30 R31 Q32 L33 R34 S35 S36 I37 E38 R39 V40 I41 F44 Q45 S46 N47 L48 F49 Q50 A51 L52 I53 D54 I55 Q56 E57 F58 Y59 E60 V61 T62 L63 L64 D65 N66

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B: 23% 59% 16% •

G81 L82 L83 A84 A85 E86 R87 A88 Q91 V92 L93 D94 S95 L96 E97 E98 I99 H100 A101 L102 T103 D104 S105 S106 D109 L110 D111 F112 L113 H114 S115 V116 F117 Q118 L122 H123 T124 L125 L126 D127 L128 Y129 D130 K131 I132 N133 T134 K135 S136

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D: 23% 55% 14% 7%

G81 L82 L83 A84 A85 E86 R87 A88 V89 S90 Q91 V92 L93 D94 S95 L96 E97 E98 I99 H100 A101 L102 T103 D104 S105 S106 E107 K108 D109 L110 D111 F112 L113 H114 S115 V116 F117 Q118 L122 H123 T124 L125 L126 D127 L128 Y129 D130 K131 T134 K135 S136

4.2.2 Score per residue for model 2

• Molecule 1: Presynaptic protein SAP97

Chain A: 30% 47% 20% •

R7 Q12 R13 A14 L15 H16 L17 L18 E19 E20 Y21 R22 S23 K24 L25 S26 Q27 T28 E29 D30 R31 Q32 L33 R34 S35 S36 I37 E38 R39 V40 I41 S42 I43 F44 Q45 S46 N47 L48 F49 L52 I53 D54 I55 Q56 E57 F58 Y59 E60 V61 T62 L63 L64 D65 N66

• Molecule 1: Presynaptic protein SAP97

Chain C: 35% 50% 12% •

R7 Q12 R13 A14 L15 H16 L17 L18 E19 E20 Y21 R22 L25 S26 Q27 T28 E29 D30 R31 Q32 L33 S36 I37 E38 R39 V40 I41 S42 I43 F44 Q45 S46 N47 L48 F49 I53 D54 I55 Q56 E57 F58 Y59 E60 V61 T62 L63 L64 D65 N66

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B: 20% 59% 18% • •

G81 L82 L83 A84 A85 E86 R87 A88 V89 S90 Q91 V92 L93 D94 S95 L96 E97 E98 I99 H100 A101 L102 T103 D104 S105 S106 E107 K108 D109 L110 D111 F112 L113 H114 S115 V116 F117 Q118 D119 Q120 H121 L122 H123 T124 L125 L126 D127 L128 Y129 D130 K131 I132 K135 S136

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D: 21% 52% 18% • 7%

G81 L82 L83 A84 A85 E86 R87 A88 V89 V92 L93 D94 S95 L96 E97 E98 I99 H100 A101 L102 T103 D104 S105 S106 E107 K108 D109 L110 D111 F112 L113 H114 S115 V116 F117 Q118 D119 L122 H123 T124 L125 L126 D127 L128 Y129 D130 K131 I132 N133 T134 K135 S136

4.2.3 Score per residue for model 3 (medoid)

• Molecule 1: Presynaptic protein SAP97

Chain A: 32% 50% 15% •

R7 K8 Q9 D10 T11 Q12 R13 A14 L15 H16 L17 L18 Y21 R22 S23 K24 L25 S26 Q27 T28 E29 D30 R31 Q32 L33 S36 I37 E38 R39 V40 I41 S42 I43 F44 Q45 S46 N47 L48 F49 Q50 A51 L52 I53 D54 I55 F58 Y59 E60 V61 T62 L63 L64 D65 N66

• Molecule 1: Presynaptic protein SAP97

Chain C: 23% 53% 20% •

R7 T11 Q12 R13 A14 L15 H16 L17 L18 E19 E20 Y21 R22 S23 K24 L25 S26 Q27 T28 E29 D30 R31 Q32 L33 R34 S35 S36 I37 E38 R39 V40 I41 S42 I43 F44 Q45 S46 N47 L48 F49 Q50 A51 L52 I53 D54 I55 Q56 E57 F58 Y59 E60 V61 T62 L63 L64 D65 N66

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B: 21% 57% 20% •

G81 L82 L83 A84 A85 E86 R87 A88 V89 S90 Q91 V92 L93 D94 S95 L96 E97 E98 I99 H100 A101 L102 T103 D104 S105 S106 E107 K108 D109 L110 D111 F112 L113 H114 S115 V116 F117 Q118 D119 L122 H123 T124 L125 L126 D127 L128 Y129 D130 K131 I132 N133 T134 K135 S136

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D: 23% 48% 21% 7%

G81 L82 L83 A84 A85 E86 R87 A88 V89 V92 L93 D94 S95 L96 E97 E98 I99 H100 A101 L102 T103 D104 S105 S106 E107 K108 D109 L110 D111 F112 L113 H114 S115 V116 F117 Q118 L122 H123 T124 L125 L126 D127 L128 Y129 D130 K131 I132 N133 T134 K135 S136

4.2.4 Score per residue for model 4

• Molecule 1: Presynaptic protein SAP97

Chain A: 38% 47% 12% •

R7 K8 T11 Q12 R13 A14 L15 H16 L17 L18 Y21 L25 S26 Q27 T28 E29 D30 L33 R34 S35 S36 I37 E38 R39 V40 I41 F44 Q45 S46 N47 L48 L52 I53 D54 I55 Q56 Y59 E60 V61 T62 L63 L64 D65 N66
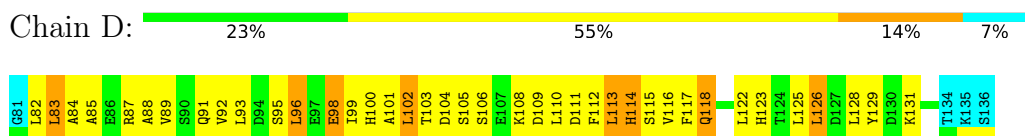
• Molecule 1: Presynaptic protein SAP97

Chain C:

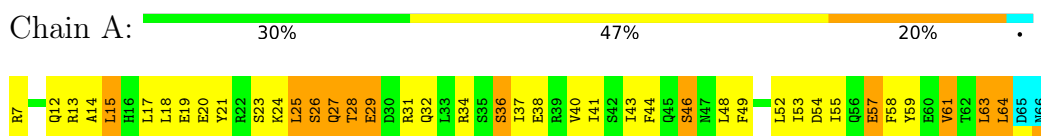• Molecule 2: Peripheral plasma membrane protein CASK

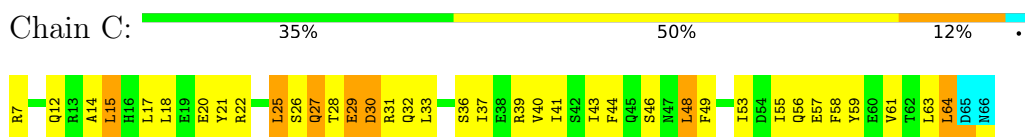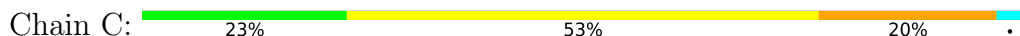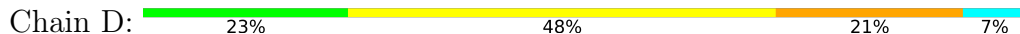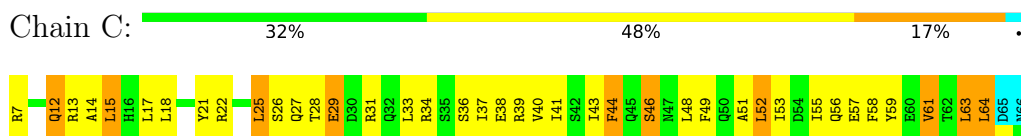Chain B:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D:

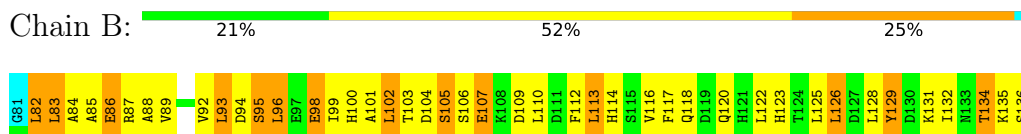### 4.2.5 Score per residue for model 5

• Molecule 1: Presynaptic protein SAP97

Chain A:

• Molecule 1: Presynaptic protein SAP97

Chain C:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D:

4.2.6 Score per residue for model 6

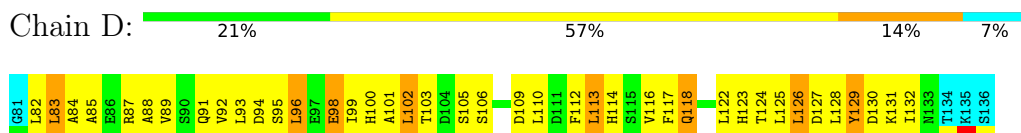• Molecule 1: Presynaptic protein SAP97

Chain A:

• Molecule 1: Presynaptic protein SAP97

Chain C:

• Molecule 2: Peripheral plasma membrane protein CASK
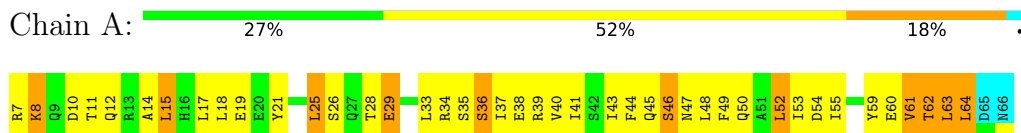
Chain B:

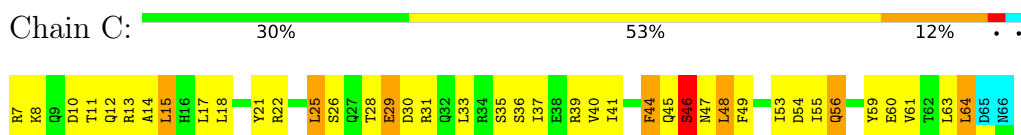• Molecule 2: Peripheral plasma membrane protein CASK

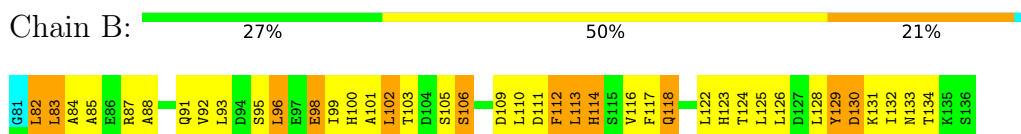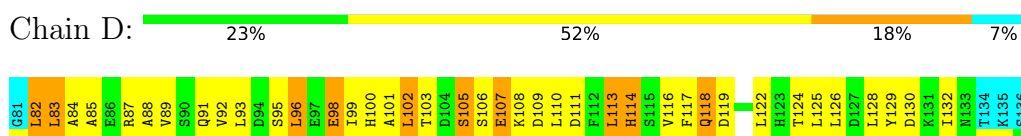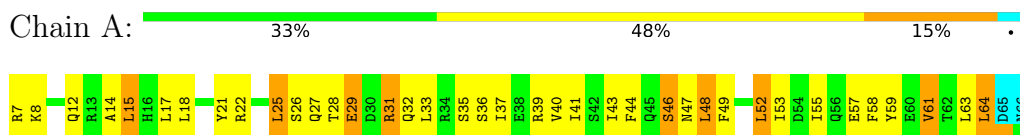Chain D:

4.2.7 Score per residue for model 7

• Molecule 1: Presynaptic protein SAP97

Chain A:

• Molecule 1: Presynaptic protein SAP97

Chain C:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B:

G81 L82 L83 A84 A85 E86 R87 A88 V92 L93 D94 S95 L96 E97 E98 I99 H100 A101 L102 T103 D104 S105 S106 E107 K108 D109 L110 D111 F112 L113 H114 S115 V116 F117 Q118 H121 L122 H123 T124 L125 L126 D127 L128 Y129 D130 K131 I132 K135 S136

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D: 18% 57% 18% 7%

G81 L82 L83 A84 A85 E86 R87 A88 V89 V92 L93 D94 S95 L96 E97 E98 I99 H100 A101 L102 T103 D104 S105 S106 E107 K108 D109 L110 D111 F112 L113 H114 S115 V116 Q118 D119 Q120 H121 L122 H123 T124 L125 L126 D127 L128 Y129 D130 K131 I132 N133 T134 K135 S136

4.2.8　Score per residue for model 8

• Molecule 1: Presynaptic protein SAP97

Chain A: 28% 55% 13% •

R7 K8 Q9 D10 T11 Q12 R13 A14 L15 H16 L17 L18 E19 E20 Y21 L25 S26 Q27 T28 E29 D30 R31 Q32 L33 S36 I37 E38 R39 V40 I41 S42 I43 F44 Q45 S46 N47 L48 F49 Q50 A51 L52 I53 D54 I55 Q56 E57 F58 Y59 E60 V61 T62 L63 L64 D65 N66

• Molecule 1: Presynaptic protein SAP97

Chain C: 30% 50% 17% •

R7 K8 T11 Q12 R13 A14 L15 H16 L17 L18 E19 E20 Y21 L25 S26 Q27 T28 E29 D30 R31 Q32 L33 R34 S35 S36 I37 E38 R39 V40 I41 S42 I43 F44 Q45 S46 N47 L48 F49 L52 I53 D54 I55 Q56 E57 F58 Y59 E60 V61 T62 L63 L64 D65 N66

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B: 18% 54% 27% •

G81 L82 L83 A84 A85 E86 R87 A88 V89 S90 Q91 V92 L93 D94 S95 L96 E97 E98 I99 H100 A101 L102 T103 D104 S105 S106 E107 K108 D109 L110 D111 F112 L113 H114 S115 V116 F117 Q118 D119 Q120 H121 L122 H123 T124 L125 L126 D127 L128 Y129 D130 K131 I132 K135 S136

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D: 23% 50% 20% 7%

G81 L82 L83 A84 A85 E86 R87 A88 V89 S90 Q91 V92 L93 D94 S95 L96 E97 E98 I99 H100 A101 L102 T103 D104 S105 S106 E107 K108 D109 L110 D111 F112 L113 H114 S115 V116 F117 Q118 L122 H123 T124 L125 L126 D127 L128 Y129 D130 K131 I132 N133 T134 K135 S136

4.2.9　Score per residue for model 9

• Molecule 1: Presynaptic protein SAP97

Chain A: 27% 52% 18% •

R7 K8 Q9 Q12 R13 A14 L15 H16 L17 L18 E19 E20 Y21 R22 S23 K24 L25 S26 Q27 T28 E29 D30 R31 Q32 L33 R34 S35 S36 I37 E38 R39 V40 I41 S42 I43 F44 Q45 S46 N47 L48 F49 L52 I53 Q56 E57 F58 Y59 E60 V61 T62 L63 L64 D65 N66

• Molecule 1: Presynaptic protein SAP97

Chain C:

• Molecule 2: Peripheral plasma membrane protein CASK
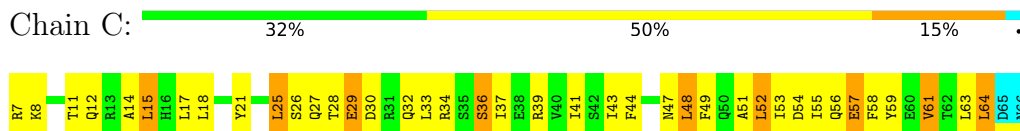
Chain B:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D:

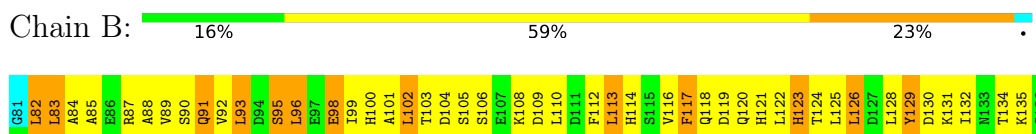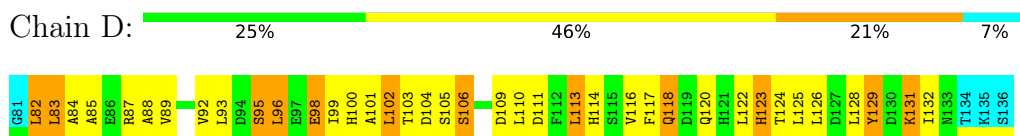### 4.2.10 Score per residue for model 10

• Molecule 1: Presynaptic protein SAP97

Chain A:

• Molecule 1: Presynaptic protein SAP97

Chain C:

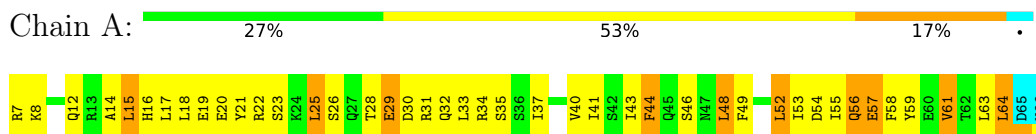• Molecule 2: Peripheral plasma membrane protein CASK

Chain B:

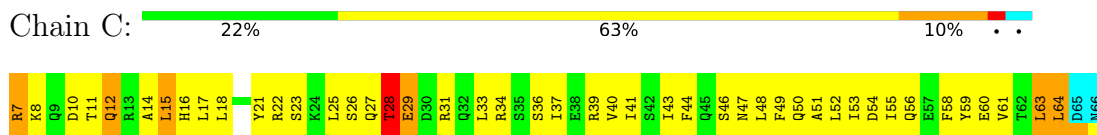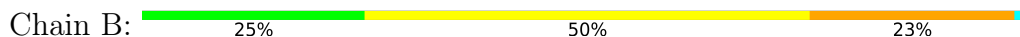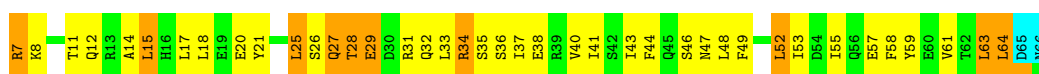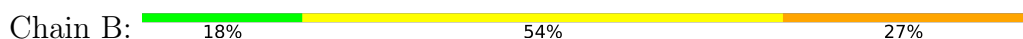• Molecule 2: Peripheral plasma membrane protein CASK

Chain D:

4.2.11 Score per residue for model 11

• Molecule 1: Presynaptic protein SAP97

Chain A: 23%   57%   17%   •

R7 K8 Q9 D10 T11 Q12 R13 A14 L15 H16 L17 L18 Y21 R22 S23 K24 L25 S26 Q27 T28 E29 D30 R31 Q32 L33 R34 S35 S36 I37 E38 R39 V40 I41 S42 I43 F44 Q45 S46 N47 L48 F49 Q50 A51 L52 I53 D54 I55 F58 Y59 E60 V61 T62 L63 L64 D65 N66

• Molecule 1: Presynaptic protein SAP97

Chain C: 28%   42%   27%   •

R7 K8 Q9 D10 T11 Q12 R13 A14 L15 H16 L17 L18 Y21 R22 L25 S26 Q27 T28 E29 Q32 L33 R34 S35 S36 I37 E38 R39 V40 I41 F44 Q45 S46 N47 L48 F49 Q50 A51 L52 I53 D54 I55 Q56 E57 F58 Y59 E60 V61 T62 L63 L64 D65 N66

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B: 23%   57%   18%   •

G81 L82 L83 A84 A85 E86 R87 A88 V89 V92 L93 D94 S95 L96 E97 E98 I99 H100 A101 L102 T103 D104 S105 S106 E107 K108 D109 L110 D111 F112 L113 H114 S115 V116 F117 Q118 D119 Q120 H121 L122 H123 T124 L125 L126 D127 L128 Y129 D130 K131 I132 K135 S136

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D: 20%   54%   20%   7%

G81 L82 L83 A84 A85 E86 R87 A88 V89 V92 L93 D94 S95 L96 E97 E98 I99 H100 A101 L102 T103 D104 S105 S106 E107 K108 D109 L110 D111 F112 L113 H114 S115 V116 F117 Q118 H121 L122 H123 T124 L125 L126 D127 L128 Y129 D130 K131 I132 N133 T134 K135 S136

4.2.12 Score per residue for model 12

• Molecule 1: Presynaptic protein SAP97

Chain A: 27%   47%   23%   •

R7 K8 Q9 D10 T11 Q12 R13 A14 L15 H16 L17 L18 E19 E20 Y21 R22 S23 K24 L25 S26 Q27 T28 E29 D30 R31 Q32 L33 R34 I37 V40 I41 S42 I43 F44 Q45 S46 N47 L48 F49 Q50 A51 L52 I53 D54 I55 Q56 Y59 E60 V61 T62 L63 L64 D65 N66

• Molecule 1: Presynaptic protein SAP97

Chain C: 27%   47%   23%   •

R7 K8 Q9 D10 T11 Q12 R13 A14 L15 H16 L17 L18 E19 E20 Y21 R22 L25 S26 Q27 T28 E29 D30 R31 Q32 L33 R34 I37 E38 R39 V40 I41 S42 I43 F44 Q45 S46 N47 L48 F49 Q50 A51 L52 I53 D54 I55 Q56 E57 F58 Y59 E60 V61 T62 L63 L64 D65 N66

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B: 29%   50%   20%   •

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D:
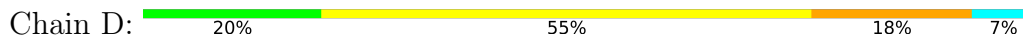
4.2.13   Score per residue for model 13

• Molecule 1: Presynaptic protein SAP97
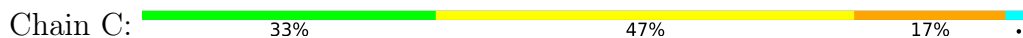
Chain A:

• Molecule 1: Presynaptic protein SAP97

Chain C:

• Molecule 2: Peripheral plasma membrane protein CASK

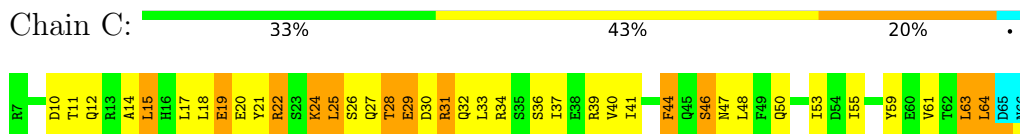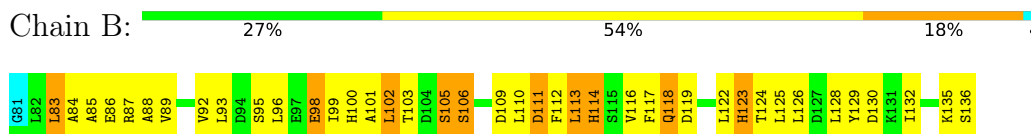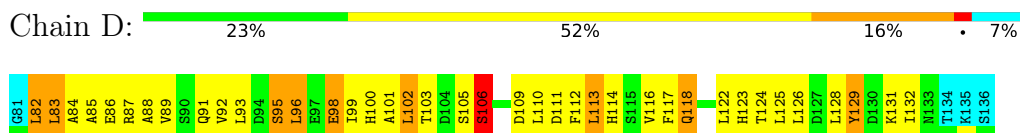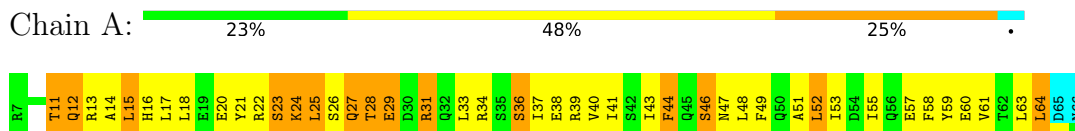Chain B:

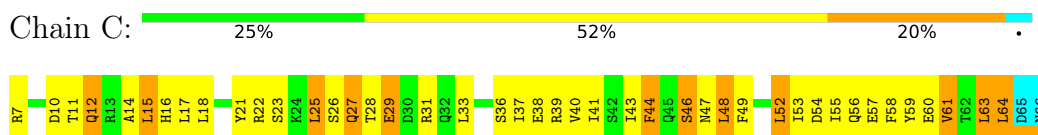• Molecule 2: Peripheral plasma membrane protein CASK

Chain D:
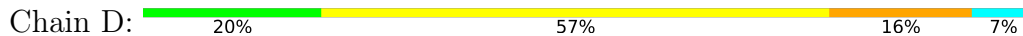
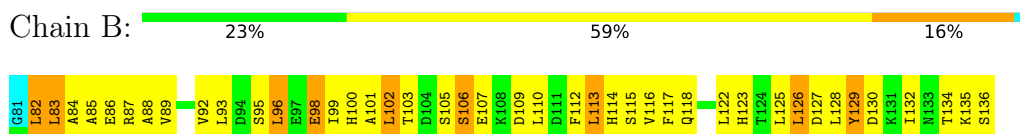

4.2.14   Score per residue for model 14

• Molecule 1: Presynaptic protein SAP97
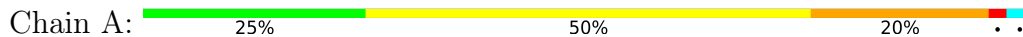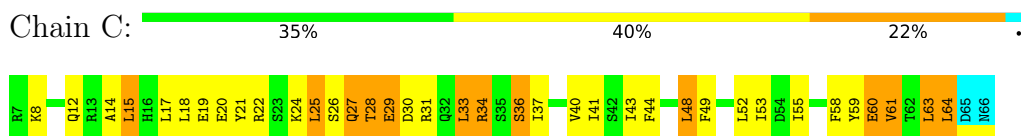
Chain A:

• Molecule 1: Presynaptic protein SAP97

Chain C:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D:
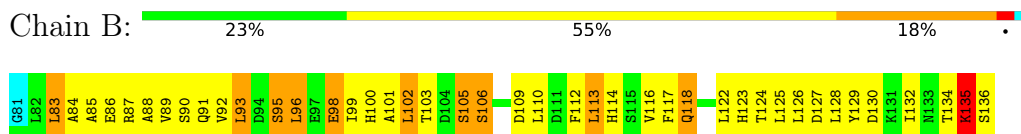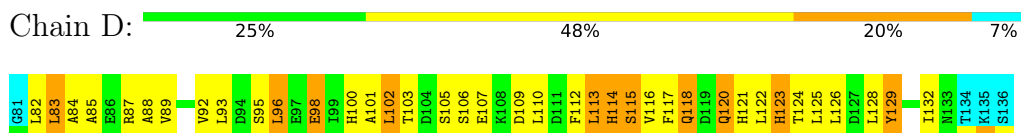
4.2.15 Score per residue for model 15

• Molecule 1: Presynaptic protein SAP97
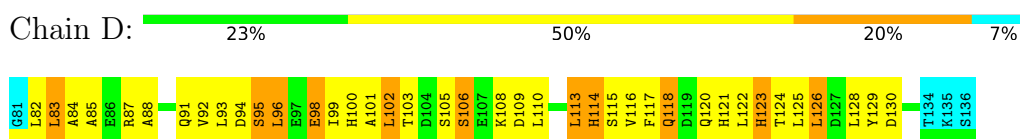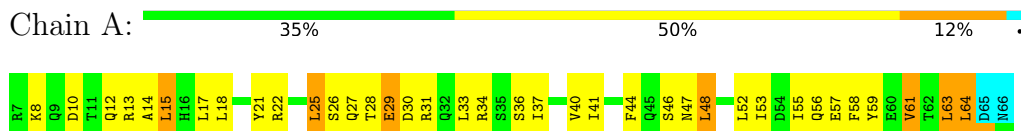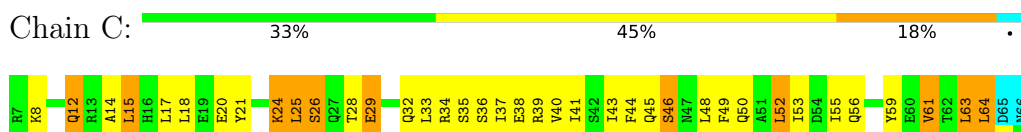
Chain A:

• Molecule 1: Presynaptic protein SAP97

Chain C:

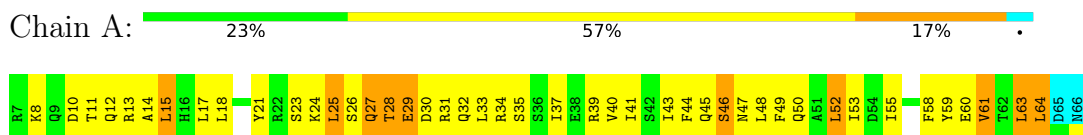• Molecule 2: Peripheral plasma membrane protein CASK

Chain B:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D:
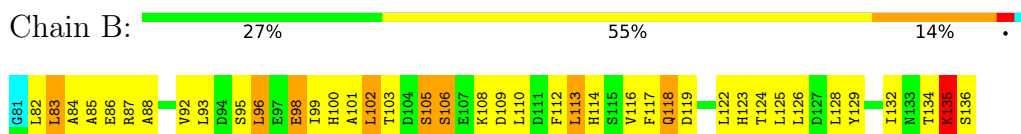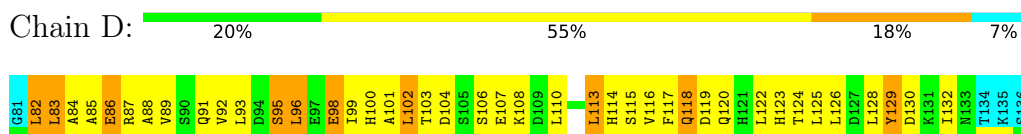
4.2.16 Score per residue for model 16

• Molecule 1: Presynaptic protein SAP97
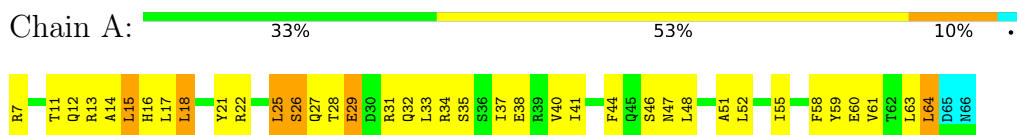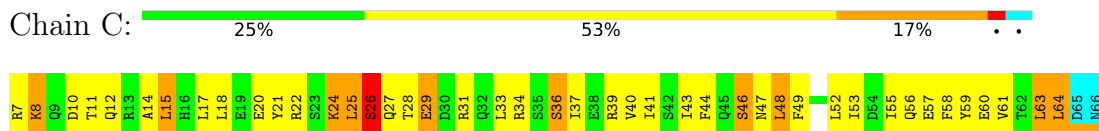
Chain A:

• Molecule 1: Presynaptic protein SAP97

Chain C:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D:
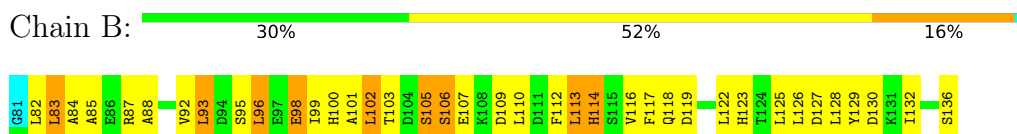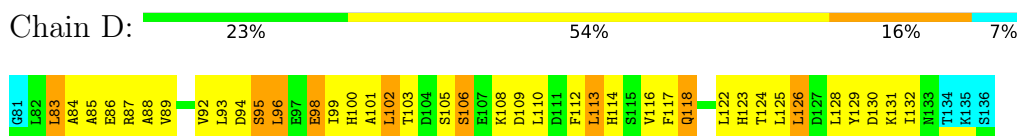
4.2.17 Score per residue for model 17

• Molecule 1: Presynaptic protein SAP97
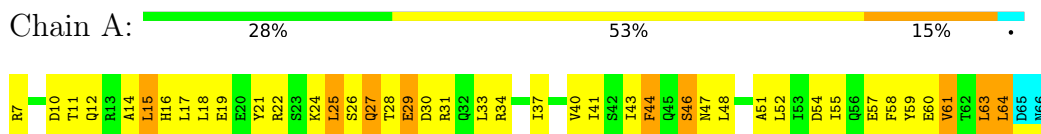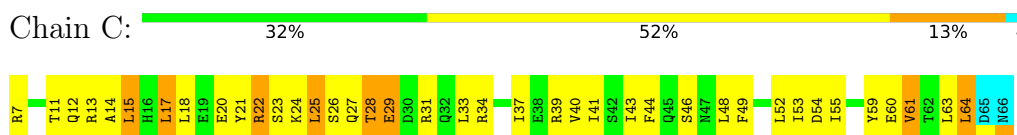
Chain A:

• Molecule 1: Presynaptic protein SAP97

Chain C:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B:

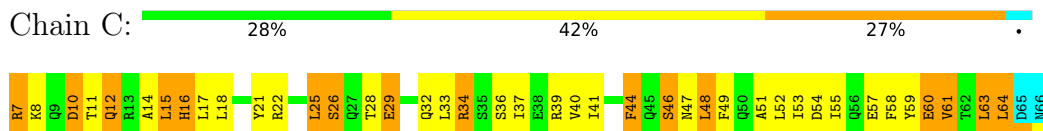• Molecule 2: Peripheral plasma membrane protein CASK

Chain D:

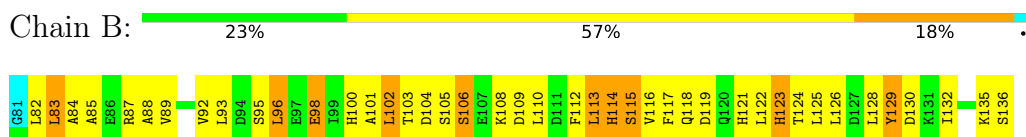### 4.2.18　Score per residue for model 18

• Molecule 1: Presynaptic protein SAP97
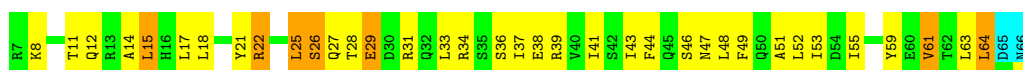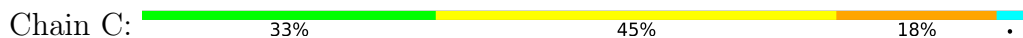
Chain A:

• Molecule 1: Presynaptic protein SAP97

Chain C:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D:
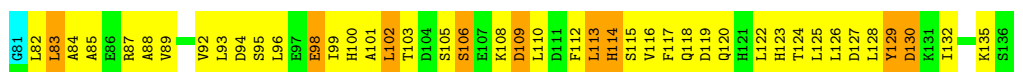
4.2.19　Score per residue for model 19

• Molecule 1: Presynaptic protein SAP97
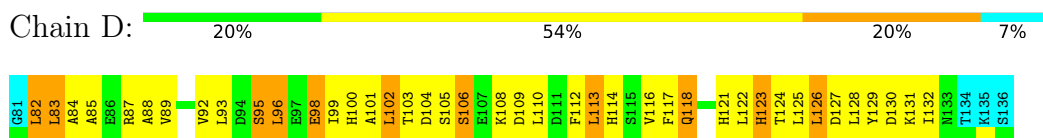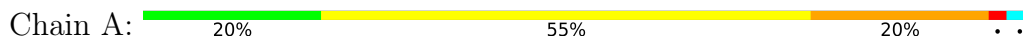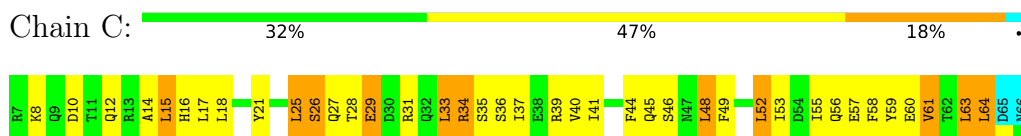
Chain A:

• Molecule 1: Presynaptic protein SAP97

Chain C:

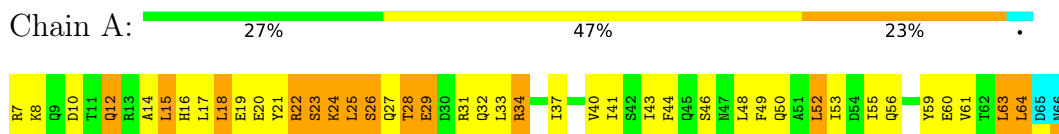• Molecule 2: Peripheral plasma membrane protein CASK

Chain B:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain D:
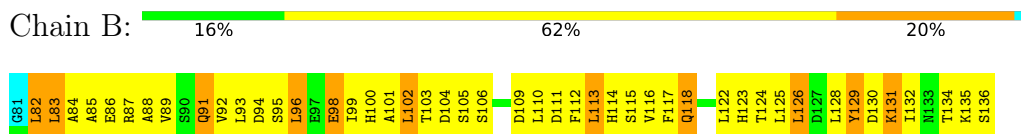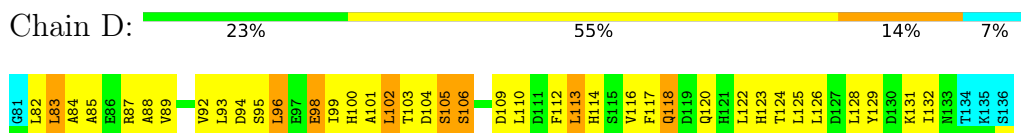
4.2.20   Score per residue for model 20

• Molecule 1: Presynaptic protein SAP97
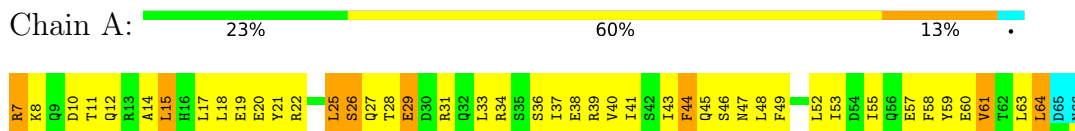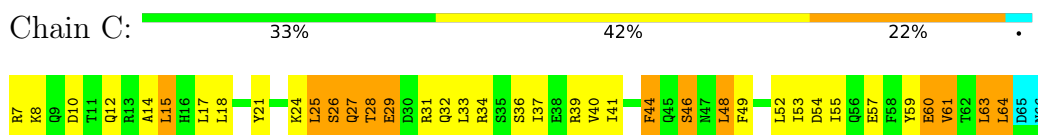
Chain A:

• Molecule 1: Presynaptic protein SAP97

Chain C:

• Molecule 2: Peripheral plasma membrane protein CASK

Chain B:

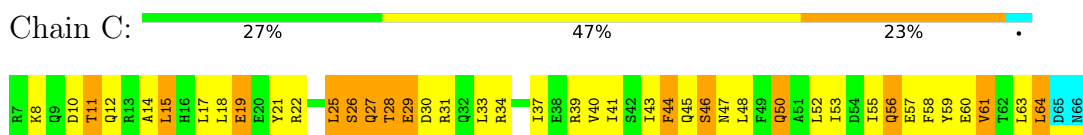• Molecule 2: Peripheral plasma membrane protein CASK

Chain D:
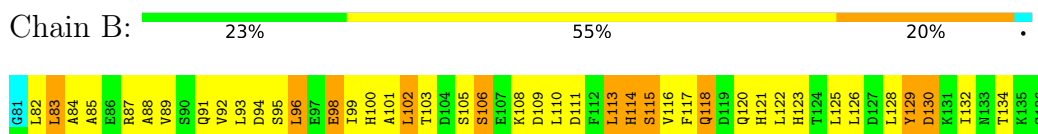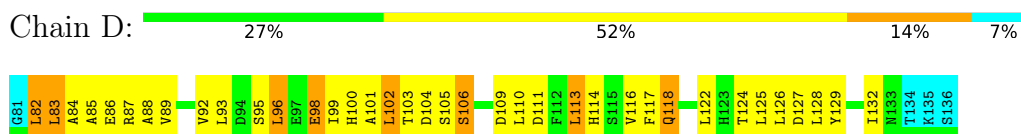
5 Refinement protocol and experimental data overview ⓘ

The models were refined using the following method: *torsion angle dynamics*.

Of the 200 calculated structures, 20 were deposited, based on the following criterion: *structures with the lowest energy*.

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

Software name	Classification	Version
CNS	structure solution	1.1
CNS	refinement	1.1

No chemical shift data was provided.

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	493	500	498	64±7
1	C	493	500	498	65±6
2	B	441	434	430	67±6
2	D	419	409	405	67±5
All	All	36920	36860	36620	4138

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 56.

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

Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
2:B:84:ALA:HB1	2:B:88:ALA:HB2	1.00	1.33	18	19
2:D:84:ALA:HB1	2:D:88:ALA:HB2	0.99	1.29	16	19
1:A:52:LEU:HD11	2:B:125:LEU:HA	0.94	1.38	12	2
2:B:83:LEU:HD23	2:B:84:ALA:H	0.93	1.22	2	20
1:A:18:LEU:HD22	2:B:92:VAL:HG11	0.92	1.38	12	17
1:C:52:LEU:HD11	2:D:125:LEU:HA	0.90	1.41	8	1
2:D:83:LEU:HD23	2:D:84:ALA:H	0.89	1.27	4	20
1:A:17:LEU:HD22	1:A:21:TYR:CE1	0.89	2.03	8	18
1:A:25:LEU:HD12	1:A:37:ILE:HD11	0.88	1.45	14	20
2:B:96:LEU:HD22	2:B:110:LEU:HD22	0.88	1.45	5	16
2:D:123:HIS:HA	2:D:126:LEU:HD12	0.88	1.44	6	17

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:18:LEU:HD22	1:A:37:ILE:HG23	0.88	1.45	14	7
1:C:18:LEU:HD22	1:C:37:ILE:HG23	0.88	1.42	19	10
2:D:85:ALA:HB1	2:D:126:LEU:CB	0.87	2.00	4	17
1:C:49:PHE:CE2	1:C:53:ILE:HD11	0.87	2.04	11	11
2:B:128:LEU:HD21	1:C:59:TYR:CD2	0.87	2.05	12	20
1:A:59:TYR:CD2	2:D:128:LEU:HD21	0.86	2.05	20	18
1:C:49:PHE:O	1:C:52:LEU:HD23	0.86	1.69	8	1
2:B:82:LEU:N	2:B:82:LEU:HD23	0.86	1.84	7	8
2:D:96:LEU:HD12	2:D:114:HIS:CD2	0.86	2.06	11	7
1:C:18:LEU:HD22	2:D:92:VAL:HG11	0.85	1.45	15	13
1:C:25:LEU:HD11	1:C:33:LEU:HG	0.85	1.45	19	3
1:C:17:LEU:HD22	1:C:21:TYR:CE1	0.85	2.06	6	14
2:B:96:LEU:HD12	2:B:114:HIS:CD2	0.85	2.07	1	2
1:A:43:ILE:HG23	2:B:129:TYR:CE2	0.84	2.07	19	13
2:B:83:LEU:HD23	2:B:84:ALA:N	0.84	1.88	1	20
2:B:123:HIS:HA	2:B:126:LEU:HD12	0.83	1.49	12	19
1:A:49:PHE:O	1:A:52:LEU:HD23	0.83	1.72	12	1
1:A:14:ALA:CB	2:B:116:VAL:HG11	0.83	2.03	19	20
1:A:18:LEU:CD2	2:B:92:VAL:HG11	0.83	2.04	10	14
1:C:18:LEU:CD2	2:D:92:VAL:HG11	0.83	2.04	11	13
1:C:17:LEU:HD22	1:C:21:TYR:CZ	0.83	2.09	11	16
1:C:14:ALA:CB	2:D:116:VAL:HG11	0.82	2.05	16	20
2:D:82:LEU:N	2:D:82:LEU:HD23	0.82	1.88	6	7
1:C:25:LEU:HD12	1:C:37:ILE:HD11	0.82	1.50	4	19
2:D:100:HIS:HB2	2:D:110:LEU:HD11	0.82	1.52	7	20
1:A:49:PHE:CE2	1:A:53:ILE:HD11	0.82	2.09	7	6
2:B:85:ALA:HB1	2:B:126:LEU:HB3	0.81	1.50	11	15
2:D:122:LEU:O	2:D:126:LEU:HD12	0.81	1.76	13	4
1:C:64:LEU:N	1:C:64:LEU:HD23	0.81	1.91	19	13
2:D:83:LEU:HD23	2:D:84:ALA:N	0.81	1.90	19	20
2:B:85:ALA:HB1	2:B:126:LEU:HB2	0.81	1.52	17	7
2:B:82:LEU:HD12	2:B:82:LEU:O	0.80	1.75	1	1
2:B:96:LEU:HD22	2:B:110:LEU:CD2	0.80	2.07	17	11
1:A:33:LEU:HD21	2:B:95:SER:HB2	0.80	1.53	5	4
1:A:63:LEU:HD11	1:C:59:TYR:CE2	0.80	2.11	7	8
2:D:96:LEU:HD22	2:D:110:LEU:HD22	0.80	1.53	3	20
2:B:100:HIS:HB2	2:B:110:LEU:HD11	0.79	1.52	18	18
2:B:85:ALA:HB1	2:B:126:LEU:CB	0.79	2.08	19	10
1:A:41:ILE:HG22	1:A:45:GLN:NE2	0.79	1.92	11	5
1:C:43:ILE:HG23	2:D:129:TYR:CE2	0.79	2.11	4	8
2:B:85:ALA:HB2	2:B:130:ASP:OD2	0.79	1.77	3	6

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:132:ILE:HG23	1:C:51:ALA:HB1	0.78	1.52	4	3
1:A:25:LEU:HD12	1:A:37:ILE:CD1	0.78	2.07	14	12
2:D:85:ALA:HB1	2:D:126:LEU:HB3	0.78	1.55	15	13
1:A:17:LEU:HD22	1:A:21:TYR:CZ	0.78	2.13	10	16
2:D:116:VAL:O	2:D:122:LEU:HD22	0.78	1.79	8	20
2:D:85:ALA:O	2:D:126:LEU:HD13	0.78	1.77	7	15
1:C:37:ILE:HD11	2:D:99:ILE:CD1	0.77	2.08	19	1
1:C:37:ILE:HD11	2:D:99:ILE:HD13	0.77	1.54	19	1
2:B:116:VAL:O	2:B:122:LEU:HD22	0.77	1.79	8	20
2:D:85:ALA:HB1	2:D:126:LEU:HB2	0.77	1.55	13	12
1:A:59:TYR:CE2	1:C:63:LEU:HD11	0.77	2.15	17	6
1:A:48:LEU:HD12	1:A:48:LEU:O	0.77	1.79	15	16
2:D:84:ALA:HB1	2:D:88:ALA:CB	0.77	2.09	16	11
2:D:89:VAL:HG13	2:D:117:PHE:CD1	0.76	2.15	4	12
2:B:83:LEU:O	2:B:87:ARG:HB3	0.76	1.80	7	20
1:C:48:LEU:HD12	1:C:48:LEU:O	0.76	1.81	17	5
1:C:52:LEU:HD13	1:C:52:LEU:H	0.76	1.41	1	2
2:B:85:ALA:O	2:B:126:LEU:HD13	0.76	1.81	19	18
1:A:55:ILE:HD11	2:D:132:ILE:CG1	0.75	2.09	8	4
1:C:18:LEU:HB3	1:C:37:ILE:HG23	0.75	1.56	14	4
2:B:112:PHE:O	2:B:116:VAL:HG23	0.75	1.82	19	15
1:C:7:ARG:O	1:C:11:THR:HG23	0.75	1.82	16	3
2:B:82:LEU:HD22	2:B:130:ASP:OD1	0.75	1.80	1	2
1:C:48:LEU:O	1:C:48:LEU:HD12	0.74	1.82	16	6
1:A:15:LEU:O	1:A:41:ILE:HD12	0.74	1.82	17	16
2:D:98:GLU:O	2:D:101:ALA:HB3	0.74	1.82	11	20
2:B:88:ALA:O	2:B:92:VAL:HG23	0.74	1.80	14	4
1:C:25:LEU:HD11	2:D:99:ILE:HG12	0.74	1.58	7	4
2:B:98:GLU:O	2:B:101:ALA:HB3	0.74	1.82	1	20
2:D:83:LEU:O	2:D:87:ARG:HB3	0.73	1.83	10	17
1:A:48:LEU:HD12	2:B:129:TYR:HA	0.73	1.58	6	4
1:C:18:LEU:CB	1:C:41:ILE:HD11	0.73	2.13	5	17
2:D:85:ALA:HB2	2:D:130:ASP:OD2	0.73	1.81	15	2
2:D:82:LEU:HD23	2:D:82:LEU:O	0.72	1.84	1	5
2:D:84:ALA:HA	2:D:87:ARG:HB2	0.72	1.61	17	3
1:A:7:ARG:O	1:A:11:THR:HG23	0.72	1.85	20	4
1:A:25:LEU:CD1	1:A:37:ILE:HD11	0.72	2.15	7	10
1:A:25:LEU:HD11	2:B:99:ILE:HG12	0.71	1.61	14	2
2:B:100:HIS:CB	2:B:110:LEU:HD11	0.71	2.16	13	13
2:B:98:GLU:OE2	2:B:102:LEU:HD21	0.71	1.84	8	7
2:B:132:ILE:CG1	1:C:55:ILE:HD11	0.71	2.14	11	5

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:C:41:ILE:HG22	1:C:45:GLN:NE2	0.71	2.01	19	3
2:D:98:GLU:OE2	2:D:102:LEU:HD21	0.71	1.85	6	13
1:C:15:LEU:HD22	1:C:44:PHE:HB3	0.71	1.61	5	20
2:B:96:LEU:HD13	2:B:110:LEU:HB3	0.71	1.63	3	7
2:D:82:LEU:HD23	2:D:82:LEU:N	0.71	1.99	3	1
1:A:15:LEU:HD22	1:A:44:PHE:HB3	0.70	1.61	19	20
1:A:18:LEU:CB	1:A:41:ILE:HD11	0.70	2.16	14	16
1:C:25:LEU:O	1:C:28:THR:HG22	0.70	1.86	8	9
1:A:49:PHE:CE1	1:A:53:ILE:HD11	0.70	2.21	5	2
1:C:33:LEU:HD21	2:D:95:SER:HB3	0.70	1.63	20	12
2:D:122:LEU:HD12	2:D:125:LEU:HD12	0.70	1.62	18	16
1:C:15:LEU:O	1:C:41:ILE:HD12	0.70	1.87	18	15
1:C:53:ILE:HG12	2:D:125:LEU:HD13	0.70	1.63	8	9
2:B:84:ALA:O	2:B:88:ALA:HB3	0.70	1.86	11	20
1:C:10:ASP:OD2	2:D:116:VAL:HG22	0.70	1.85	11	1
1:A:11:THR:HG23	1:A:44:PHE:CD1	0.70	2.22	1	1
2:B:128:LEU:O	2:B:132:ILE:HD12	0.70	1.86	20	19
1:C:33:LEU:HD11	2:D:95:SER:OG	0.70	1.86	13	2
1:A:64:LEU:N	1:A:64:LEU:HD23	0.70	2.01	12	20
1:A:18:LEU:HB3	1:A:37:ILE:HG23	0.70	1.63	16	7
1:A:14:ALA:HB2	2:B:116:VAL:HG11	0.70	1.62	5	16
2:D:109:ASP:O	2:D:113:LEU:HD12	0.70	1.87	5	18
1:A:63:LEU:HD12	2:B:124:THR:HG23	0.70	1.64	12	1
1:A:33:LEU:HD21	2:B:95:SER:HB3	0.69	1.63	18	12
2:D:100:HIS:CB	2:D:110:LEU:HD11	0.69	2.17	1	15
2:D:93:LEU:HD21	2:D:114:HIS:HA	0.69	1.62	17	20
2:D:96:LEU:HD22	2:D:110:LEU:CD2	0.69	2.17	9	10
1:A:53:ILE:HG12	2:B:125:LEU:HD13	0.69	1.64	15	10
1:A:55:ILE:HG22	1:A:59:TYR:HB2	0.69	1.63	15	18
1:C:64:LEU:HD23	1:C:64:LEU:N	0.69	2.02	15	7
1:A:25:LEU:HD11	1:A:33:LEU:CD2	0.69	2.17	9	3
1:A:49:PHE:HA	1:A:52:LEU:HD23	0.69	1.64	6	1
1:C:25:LEU:HD12	1:C:37:ILE:CD1	0.69	2.17	8	14
2:D:128:LEU:O	2:D:132:ILE:HD12	0.69	1.87	2	13
2:B:82:LEU:O	2:B:82:LEU:HD23	0.69	1.87	11	7
1:A:17:LEU:CD1	2:B:113:LEU:HD11	0.69	2.18	16	20
1:C:52:LEU:HD13	2:D:125:LEU:O	0.69	1.88	20	9
1:C:40:VAL:HG12	1:C:44:PHE:CE2	0.69	2.22	12	4
1:A:59:TYR:CE2	2:D:128:LEU:HD21	0.69	2.23	10	16
1:A:56:GLN:NE2	2:B:125:LEU:HD21	0.69	2.03	13	2
2:B:96:LEU:HD12	2:B:114:HIS:CE1	0.69	2.22	10	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
2:B:84:ALA:HB1	2:B:88:ALA:CB	0.68	2.15	18	9
2:B:122:LEU:HD12	2:B:125:LEU:HD12	0.68	1.65	5	17
2:D:96:LEU:HD13	2:D:110:LEU:HB3	0.68	1.65	2	7
1:A:15:LEU:HA	1:A:18:LEU:HD12	0.68	1.64	19	9
1:A:18:LEU:HD22	2:B:92:VAL:CG1	0.68	2.17	12	3
1:C:55:ILE:HG22	1:C:59:TYR:HB2	0.68	1.65	3	20
2:D:84:ALA:O	2:D:88:ALA:HB3	0.68	1.88	1	17
1:A:18:LEU:HB3	1:A:41:ILE:HD11	0.68	1.65	4	16
1:C:15:LEU:HA	1:C:18:LEU:HD12	0.68	1.66	20	11
1:A:40:VAL:HG11	2:B:117:PHE:CZ	0.68	2.23	16	3
2:B:89:VAL:HG13	2:B:117:PHE:CD1	0.68	2.23	17	8
2:B:122:LEU:O	2:B:126:LEU:HD12	0.67	1.89	6	3
2:B:132:ILE:HG21	1:C:48:LEU:HD13	0.67	1.67	13	1
1:C:18:LEU:CD2	1:C:37:ILE:HG23	0.67	2.19	19	3
1:C:18:LEU:HD11	2:D:117:PHE:CZ	0.67	2.25	8	11
1:C:56:GLN:NE2	2:D:125:LEU:HD21	0.67	2.04	12	4
1:C:26:SER:OG	1:C:34:ARG:HB3	0.67	1.89	11	1
1:A:36:SER:HB3	2:B:91:GLN:NE2	0.67	2.05	14	4
1:C:36:SER:OG	2:D:92:VAL:HG22	0.67	1.89	7	1
1:C:25:LEU:HD11	1:C:33:LEU:CD2	0.67	2.20	12	3
1:C:25:LEU:HD23	2:D:102:LEU:HD13	0.66	1.64	14	13
1:C:52:LEU:HD13	1:C:52:LEU:N	0.66	2.05	6	1
1:C:40:VAL:HG12	1:C:44:PHE:CD2	0.66	2.24	10	8
2:B:93:LEU:CD1	2:B:117:PHE:HB2	0.66	2.20	14	1
2:B:132:ILE:HG12	1:C:55:ILE:HD11	0.66	1.67	11	1
2:B:82:LEU:N	2:B:82:LEU:CD2	0.66	2.57	7	8
1:C:48:LEU:HD12	2:D:129:TYR:HA	0.65	1.67	10	7
2:D:89:VAL:HG12	2:D:117:PHE:HB3	0.65	1.67	7	7
1:A:40:VAL:HG12	1:A:44:PHE:CE2	0.65	2.26	13	5
2:D:82:LEU:N	2:D:82:LEU:CD2	0.65	2.60	6	8
2:B:128:LEU:CD2	1:C:55:ILE:HG23	0.65	2.22	20	4
2:B:132:ILE:HG23	1:C:51:ALA:CB	0.65	2.22	4	2
1:A:59:TYR:CZ	1:C:63:LEU:HD11	0.65	2.26	14	8
1:A:40:VAL:HG12	1:A:44:PHE:CD2	0.65	2.26	1	8
2:B:96:LEU:HD22	2:B:110:LEU:HD23	0.65	1.67	3	2
1:C:14:ALA:HB2	2:D:116:VAL:HG11	0.65	1.68	1	9
1:C:33:LEU:HD21	2:D:95:SER:HB2	0.65	1.67	5	2
1:C:18:LEU:HB3	1:C:41:ILE:HD11	0.65	1.69	18	16
1:A:11:THR:HG23	1:A:44:PHE:CE1	0.64	2.27	1	1
2:B:82:LEU:HD12	2:B:82:LEU:C	0.64	2.12	1	1
1:C:25:LEU:CD1	1:C:37:ILE:HD11	0.64	2.22	6	8

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:18:LEU:CD2	1:A:37:ILE:HG23	0.64	2.19	14	2
1:C:25:LEU:C	1:C:25:LEU:HD22	0.64	2.12	14	4
1:C:25:LEU:HD11	1:C:33:LEU:HD23	0.64	1.68	12	2
2:B:83:LEU:O	2:B:87:ARG:CB	0.64	2.45	7	15
1:C:21:TYR:O	1:C:25:LEU:HB2	0.64	1.93	15	17
1:C:17:LEU:CD1	2:D:113:LEU:HD11	0.64	2.23	8	20
1:A:25:LEU:HD23	2:B:102:LEU:HD13	0.64	1.70	13	16
1:A:48:LEU:HD13	1:A:48:LEU:O	0.64	1.93	6	4
2:D:112:PHE:O	2:D:116:VAL:HG23	0.64	1.92	18	7
1:A:18:LEU:HD11	2:B:117:PHE:HZ	0.63	1.52	14	9
1:C:48:LEU:CD1	1:C:52:LEU:HD12	0.63	2.23	19	4
2:B:88:ALA:HA	2:B:91:GLN:NE2	0.63	2.08	14	3
1:C:8:LYS:HG2	1:C:53:ILE:HG21	0.63	1.71	5	3
1:C:48:LEU:O	1:C:51:ALA:HB3	0.63	1.93	6	5
1:C:48:LEU:HD13	1:C:48:LEU:O	0.63	1.94	5	8
2:B:89:VAL:HG13	2:B:117:PHE:CD2	0.63	2.28	14	3
1:C:36:SER:O	1:C:40:VAL:HG23	0.63	1.92	7	3
1:A:21:TYR:O	1:A:25:LEU:HB2	0.63	1.93	17	19
1:C:52:LEU:HD22	1:C:53:ILE:N	0.62	2.09	1	1
1:A:28:THR:HG23	1:A:29:GLU:H	0.62	1.54	1	15
2:D:82:LEU:HD12	2:D:82:LEU:N	0.62	2.08	13	1
1:A:34:ARG:HA	1:A:37:ILE:HD12	0.62	1.71	4	7
1:C:48:LEU:HD21	2:D:132:ILE:HB	0.62	1.70	2	9
2:D:83:LEU:O	2:D:87:ARG:CB	0.62	2.47	10	14
1:C:25:LEU:HD23	2:D:102:LEU:CD1	0.62	2.24	14	8
2:B:109:ASP:O	2:B:113:LEU:HD12	0.62	1.94	13	20
1:A:43:ILE:HG23	2:B:129:TYR:CD2	0.62	2.30	19	9
1:A:52:LEU:HD13	2:B:125:LEU:O	0.62	1.95	5	9
2:B:128:LEU:HD21	1:C:59:TYR:CE2	0.62	2.30	18	15
1:A:48:LEU:HD21	2:B:132:ILE:HB	0.61	1.72	1	12
2:B:93:LEU:HD21	2:B:114:HIS:HA	0.61	1.71	20	17
1:C:25:LEU:HD12	1:C:37:ILE:HD12	0.61	1.72	7	1
1:A:18:LEU:HB2	1:A:41:ILE:HD11	0.61	1.72	16	6
1:C:48:LEU:HD23	2:D:129:TYR:O	0.61	1.95	4	8
1:A:48:LEU:HD13	2:D:132:ILE:CG2	0.61	2.25	5	1
1:A:39:ARG:HG3	2:B:88:ALA:HB1	0.61	1.72	18	7
1:A:24:LYS:O	2:B:103:THR:HG22	0.61	1.96	11	2
2:D:107:GLU:HA	2:D:110:LEU:HD12	0.60	1.72	15	4
2:D:88:ALA:O	2:D:92:VAL:HG23	0.60	1.95	3	5
2:D:96:LEU:HD12	2:D:114:HIS:NE2	0.60	2.11	12	2
1:C:25:LEU:C	1:C:25:LEU:CD2	0.60	2.69	14	11

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:C:11:THR:HG23	1:C:44:PHE:CD2	0.60	2.31	17	4
2:B:123:HIS:HA	2:B:126:LEU:CD1	0.60	2.26	4	7
1:C:48:LEU:HD12	1:C:51:ALA:HB3	0.60	1.74	4	1
1:C:37:ILE:O	1:C:41:ILE:HG12	0.60	1.96	13	19
1:A:25:LEU:HD11	1:A:33:LEU:HD23	0.60	1.73	9	2
2:B:114:HIS:O	2:B:118:GLN:HG2	0.60	1.97	6	4
1:A:49:PHE:CE1	2:B:126:LEU:HD23	0.59	2.32	1	7
1:A:10:ASP:HB3	2:B:116:VAL:HG22	0.59	1.72	13	8
1:A:11:THR:HG22	1:A:44:PHE:CE1	0.59	2.32	17	3
1:C:18:LEU:O	1:C:37:ILE:HG21	0.59	1.97	19	8
2:B:128:LEU:CD2	1:C:55:ILE:HD12	0.59	2.28	19	1
1:A:61:VAL:CG1	1:C:61:VAL:HG13	0.59	2.28	6	4
1:A:33:LEU:HD11	2:B:95:SER:OG	0.59	1.97	9	2
2:B:83:LEU:CD2	2:B:84:ALA:N	0.59	2.66	2	20
2:B:134:THR:HG22	2:B:134:THR:O	0.58	1.98	20	8
1:C:39:ARG:HG3	2:D:88:ALA:HB1	0.58	1.74	18	10
1:C:61:VAL:CG2	2:D:124:THR:HG21	0.58	2.29	6	6
1:C:30:ASP:OD2	1:C:33:LEU:HD23	0.58	1.96	14	1
1:C:8:LYS:CB	1:C:53:ILE:HG21	0.58	2.28	16	1
2:D:85:ALA:O	2:D:126:LEU:HD22	0.58	1.99	19	9
1:C:49:PHE:CE1	2:D:126:LEU:HD23	0.58	2.34	2	2
1:A:18:LEU:HD21	2:B:92:VAL:HG11	0.58	1.75	4	2
2:B:89:VAL:HG13	2:B:117:PHE:CG	0.58	2.33	14	1
1:A:59:TYR:CE1	1:C:63:LEU:HD12	0.58	2.33	1	2
2:B:93:LEU:CD2	2:B:114:HIS:HA	0.58	2.29	19	9
1:C:43:ILE:HG23	2:D:129:TYR:CD2	0.58	2.33	14	7
2:D:96:LEU:HD12	2:D:114:HIS:CE1	0.58	2.33	20	2
1:C:33:LEU:HD21	2:D:95:SER:CB	0.58	2.29	11	4
1:C:18:LEU:HD21	2:D:92:VAL:HG11	0.58	1.75	5	6
2:D:82:LEU:CD1	2:D:82:LEU:N	0.58	2.66	9	2
2:D:84:ALA:CB	2:D:88:ALA:HB2	0.58	2.19	16	5
1:A:18:LEU:HD11	2:B:117:PHE:CZ	0.58	2.33	7	13
1:A:59:TYR:CE1	2:D:128:LEU:HD21	0.58	2.34	1	2
1:C:28:THR:HG23	1:C:29:GLU:N	0.58	2.14	8	16
1:C:14:ALA:O	2:D:113:LEU:HD21	0.58	1.99	5	16
1:A:33:LEU:HD21	2:B:95:SER:CB	0.58	2.25	5	4
2:D:123:HIS:HA	2:D:126:LEU:CD1	0.58	2.29	16	8
1:C:17:LEU:HD12	2:D:113:LEU:HD11	0.58	1.74	19	17
1:C:14:ALA:HB1	2:D:113:LEU:HD23	0.57	1.74	15	17
1:A:48:LEU:HD13	2:D:132:ILE:HG23	0.57	1.76	5	1
1:A:18:LEU:O	1:A:37:ILE:HG21	0.57	2.00	13	11

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
2:B:107:GLU:HA	2:B:110:LEU:HD12	0.57	1.75	4	6
1:C:64:LEU:N	1:C:64:LEU:CD2	0.57	2.64	19	7
1:C:25:LEU:HD11	1:C:33:LEU:CG	0.57	2.26	19	2
2:D:85:ALA:HB2	2:D:130:ASP:OD1	0.57	1.99	2	1
1:C:28:THR:HG23	1:C:29:GLU:H	0.57	1.60	5	12
2:B:93:LEU:HD11	2:B:117:PHE:HB2	0.57	1.76	6	3
2:B:89:VAL:HG12	2:B:117:PHE:HB3	0.57	1.76	4	7
2:B:98:GLU:CD	2:B:102:LEU:HD21	0.57	2.20	10	2
1:A:63:LEU:CD1	2:B:124:THR:HG23	0.57	2.29	1	1
1:A:28:THR:HG23	1:A:29:GLU:N	0.57	2.15	10	18
1:A:40:VAL:HG21	2:B:92:VAL:HG21	0.57	1.75	1	3
1:C:18:LEU:HD11	2:D:117:PHE:HZ	0.57	1.58	13	12
1:C:56:GLN:HG3	2:D:125:LEU:HD21	0.57	1.76	4	1
1:C:18:LEU:HB2	1:C:41:ILE:HD11	0.57	1.75	15	7
2:D:82:LEU:N	2:D:82:LEU:HD12	0.57	2.15	9	3
2:D:82:LEU:C	2:D:82:LEU:HD12	0.57	2.21	4	1
1:A:11:THR:HG23	1:A:44:PHE:CD2	0.57	2.35	11	2
2:D:83:LEU:O	2:D:87:ARG:HB2	0.57	2.00	13	3
1:A:61:VAL:HG12	1:C:61:VAL:HG13	0.56	1.76	6	2
1:A:37:ILE:O	1:A:41:ILE:HG12	0.56	2.00	8	20
2:B:85:ALA:O	2:B:126:LEU:HD22	0.56	1.99	13	12
1:C:48:LEU:O	1:C:52:LEU:HD13	0.56	2.01	1	1
1:A:26:SER:HB2	1:A:31:ARG:HA	0.56	1.76	10	2
1:A:63:LEU:HD11	1:C:59:TYR:CZ	0.56	2.36	20	4
1:C:7:ARG:NH2	2:D:122:LEU:HD13	0.56	2.16	7	1
1:C:36:SER:HB2	2:D:92:VAL:HG22	0.56	1.78	14	1
2:D:124:THR:HG22	2:D:128:LEU:HD11	0.56	1.76	5	7
1:C:52:LEU:HA	1:C:55:ILE:HD12	0.56	1.78	8	1
1:C:18:LEU:HD22	2:D:92:VAL:CG1	0.56	2.28	15	1
2:D:83:LEU:CD2	2:D:84:ALA:N	0.56	2.69	4	20
1:C:49:PHE:CD2	1:C:53:ILE:HD11	0.55	2.36	20	2
2:B:85:ALA:HB2	2:B:130:ASP:OD1	0.55	2.02	20	2
2:D:82:LEU:HD21	2:D:131:LYS:HG2	0.55	1.78	13	1
2:D:87:ARG:O	2:D:91:GLN:HG3	0.55	2.01	4	5
2:B:82:LEU:HD13	2:B:82:LEU:O	0.55	2.01	5	1
1:A:52:LEU:HD11	2:B:125:LEU:CA	0.55	2.25	12	1
1:A:25:LEU:C	1:A:25:LEU:CD2	0.55	2.75	13	5
2:B:134:THR:HG22	2:B:135:LYS:HD3	0.55	1.77	17	1
1:A:61:VAL:CG2	2:B:124:THR:HG21	0.55	2.31	1	7
1:A:55:ILE:HD11	2:D:132:ILE:HG12	0.55	1.79	8	3
1:C:21:TYR:O	1:C:25:LEU:CB	0.55	2.55	9	4

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:40:VAL:CG2	2:B:92:VAL:HG21	0.55	2.32	1	5
1:A:21:TYR:O	1:A:25:LEU:CB	0.55	2.55	13	4
1:A:55:ILE:HG22	1:A:59:TYR:CB	0.55	2.31	15	3
1:A:17:LEU:HD12	2:B:113:LEU:HD11	0.55	1.79	8	18
1:C:36:SER:HB3	2:D:91:GLN:NE2	0.55	2.17	13	2
2:B:84:ALA:CB	2:B:88:ALA:HB2	0.55	2.21	9	3
2:B:132:ILE:CG2	1:C:48:LEU:HD13	0.55	2.31	13	2
1:A:11:THR:HG23	1:A:44:PHE:CE2	0.54	2.37	11	2
1:C:49:PHE:O	1:C:52:LEU:HD22	0.54	2.02	1	2
1:A:19:GLU:CD	1:A:41:ILE:HG21	0.54	2.23	20	2
2:B:93:LEU:HD13	2:B:117:PHE:CB	0.54	2.33	14	1
2:B:87:ARG:O	2:B:91:GLN:HG3	0.54	2.03	19	6
1:C:48:LEU:HD23	2:D:133:ASN:HB2	0.54	1.79	2	1
1:C:11:THR:HG23	1:C:44:PHE:CE2	0.54	2.36	13	3
1:C:48:LEU:HD12	1:C:52:LEU:HD12	0.54	1.78	10	2
1:A:48:LEU:HD23	2:B:129:TYR:O	0.54	2.03	18	10
2:B:83:LEU:HD11	2:B:87:ARG:NH1	0.54	2.18	19	2
1:A:63:LEU:HD11	2:B:124:THR:HG23	0.54	1.79	1	1
2:B:114:HIS:CD2	2:B:114:HIS:C	0.54	2.81	11	3
2:D:114:HIS:C	2:D:114:HIS:CD2	0.54	2.80	10	2
1:A:59:TYR:CD1	2:D:128:LEU:HD21	0.54	2.37	16	2
1:A:8:LYS:HB3	1:A:53:ILE:HG21	0.54	1.80	5	1
1:C:26:SER:HB2	1:C:31:ARG:HD2	0.54	1.80	7	4
1:A:25:LEU:C	1:A:25:LEU:HD22	0.54	2.24	12	2
1:C:56:GLN:HE22	2:D:125:LEU:HD21	0.53	1.62	5	1
1:C:10:ASP:HB3	2:D:116:VAL:HG22	0.53	1.79	7	4
1:C:11:THR:HG22	1:C:44:PHE:CE1	0.53	2.37	9	2
1:A:49:PHE:HE1	1:A:53:ILE:HD11	0.53	1.63	10	1
2:B:114:HIS:C	2:B:114:HIS:CD2	0.53	2.82	18	1
1:A:33:LEU:HD11	2:B:95:SER:CB	0.53	2.33	9	11
2:B:99:ILE:HG23	2:B:103:THR:HG21	0.53	1.78	17	8
1:C:17:LEU:HD22	1:C:21:TYR:CE2	0.53	2.38	14	1
1:A:40:VAL:HG13	1:A:44:PHE:CE1	0.53	2.39	12	1
1:C:15:LEU:O	1:C:41:ILE:HD13	0.53	2.03	12	1
1:C:15:LEU:HB3	1:C:44:PHE:CD2	0.53	2.38	13	11
1:A:36:SER:O	1:A:40:VAL:HG23	0.53	2.02	4	3
1:C:40:VAL:O	1:C:44:PHE:HB2	0.53	2.03	8	7
1:A:24:LYS:HE2	2:B:103:THR:HG22	0.53	1.80	10	1
1:A:21:TYR:HA	1:A:24:LYS:HE2	0.53	1.79	3	2
1:A:17:LEU:HD22	1:A:21:TYR:CE2	0.53	2.39	10	1
1:A:25:LEU:HD23	2:B:102:LEU:CD1	0.53	2.34	13	5

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
2:D:123:HIS:CA	2:D:126:LEU:HD12	0.53	2.30	7	12
1:C:40:VAL:HG21	2:D:92:VAL:HG21	0.53	1.80	15	1
1:A:25:LEU:O	1:A:28:THR:HG22	0.53	2.04	11	14
2:D:88:ALA:HA	2:D:91:GLN:NE2	0.53	2.18	4	4
1:A:49:PHE:HE2	1:A:53:ILE:HD11	0.53	1.58	7	1
1:C:33:LEU:HD11	2:D:95:SER:CB	0.52	2.34	1	13
1:A:36:SER:CB	2:B:91:GLN:NE2	0.52	2.72	14	6
1:C:61:VAL:HG23	2:D:124:THR:HG21	0.52	1.81	12	10
1:A:55:ILE:HG23	2:D:128:LEU:CD2	0.52	2.35	6	2
1:C:56:GLN:OE1	2:D:125:LEU:HD21	0.52	2.04	15	1
2:B:82:LEU:HD13	2:B:131:LYS:HD2	0.52	1.80	19	1
2:B:128:LEU:HD22	1:C:55:ILE:CG2	0.52	2.34	20	1
1:A:21:TYR:O	1:A:25:LEU:N	0.52	2.42	17	15
1:C:17:LEU:HD22	1:C:21:TYR:OH	0.52	2.04	7	1
1:A:51:ALA:CB	2:D:132:ILE:HG23	0.52	2.35	17	3
1:A:40:VAL:O	1:A:44:PHE:HB2	0.52	2.04	15	8
1:A:61:VAL:HG23	2:B:124:THR:HG21	0.52	1.82	9	10
1:A:15:LEU:HB3	1:A:44:PHE:CD2	0.52	2.39	11	6
1:A:52:LEU:HD13	2:B:128:LEU:HB2	0.52	1.82	12	1
1:A:40:VAL:HG12	1:A:44:PHE:CD1	0.52	2.39	3	5
2:D:99:ILE:HG23	2:D:103:THR:HG21	0.52	1.81	4	3
1:C:52:LEU:HD13	2:D:128:LEU:HB2	0.52	1.80	8	1
1:C:10:ASP:HB2	2:D:116:VAL:HG22	0.52	1.82	16	1
1:A:48:LEU:HD12	1:A:48:LEU:C	0.52	2.24	1	13
2:D:99:ILE:O	2:D:103:THR:HG23	0.52	2.04	3	12
1:C:49:PHE:HA	1:C:52:LEU:CD2	0.52	2.34	8	1
2:D:84:ALA:HA	2:D:87:ARG:CB	0.52	2.35	17	3
1:A:26:SER:HB2	1:A:31:ARG:HD2	0.52	1.80	14	1
1:C:48:LEU:CD1	1:C:48:LEU:C	0.51	2.78	18	9
1:C:52:LEU:HD22	1:C:53:ILE:H	0.51	1.65	1	1
1:C:52:LEU:HD23	2:D:125:LEU:HD22	0.51	1.81	1	1
1:A:18:LEU:CD1	1:A:40:VAL:HG11	0.51	2.34	7	2
2:B:82:LEU:HD23	2:B:82:LEU:H	0.51	1.64	2	1
2:D:96:LEU:O	2:D:99:ILE:HB	0.51	2.05	2	8
1:A:61:VAL:HG13	1:C:61:VAL:CG1	0.51	2.35	18	3
2:B:82:LEU:HD22	2:B:130:ASP:HB2	0.51	1.82	5	2
2:B:134:THR:HG22	2:B:135:LYS:HG2	0.51	1.82	14	1
2:D:82:LEU:HA	2:D:130:ASP:CG	0.51	2.26	2	1
2:D:99:ILE:O	2:D:103:THR:OG1	0.51	2.27	10	18
2:B:99:ILE:O	2:B:103:THR:HG23	0.51	2.05	13	11
1:A:8:LYS:HG2	1:A:53:ILE:HG21	0.51	1.83	4	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:26:SER:HB3	1:A:34:ARG:HB2	0.51	1.83	10	2
1:A:48:LEU:CD1	2:B:129:TYR:HA	0.51	2.36	19	3
1:C:26:SER:HB2	1:C:31:ARG:HA	0.51	1.81	17	4
2:B:82:LEU:O	2:B:82:LEU:CD1	0.51	2.54	1	1
2:D:96:LEU:HD13	2:D:110:LEU:CB	0.51	2.34	15	5
2:B:93:LEU:CD1	2:B:117:PHE:CB	0.51	2.89	14	1
1:A:48:LEU:HD23	2:B:133:ASN:HB2	0.51	1.81	1	1
1:C:18:LEU:CD1	1:C:40:VAL:HG11	0.51	2.36	7	3
1:A:14:ALA:O	2:B:113:LEU:HD21	0.51	2.06	19	14
1:C:56:GLN:CG	2:D:125:LEU:HD21	0.51	2.35	4	1
1:A:8:LYS:CB	1:A:53:ILE:HG21	0.51	2.35	5	1
1:A:48:LEU:CD1	1:A:48:LEU:C	0.51	2.79	7	4
1:C:7:ARG:HG3	1:C:11:THR:HG23	0.51	1.81	8	1
1:C:40:VAL:CG2	2:D:92:VAL:HG21	0.51	2.36	15	1
2:D:100:HIS:HB2	2:D:110:LEU:CD1	0.51	2.33	7	17
1:C:36:SER:CB	2:D:91:GLN:NE2	0.51	2.73	4	5
1:C:45:GLN:O	1:C:46:SER:C	0.51	2.50	15	1
2:D:93:LEU:CD2	2:D:114:HIS:HA	0.51	2.36	18	12
1:A:25:LEU:CD2	1:A:25:LEU:C	0.51	2.79	11	3
2:B:123:HIS:CA	2:B:126:LEU:HD12	0.50	2.31	3	12
1:C:10:ASP:OD1	1:C:11:THR:N	0.50	2.44	5	3
2:B:96:LEU:HD11	2:B:113:LEU:HB2	0.50	1.83	19	2
1:A:21:TYR:HA	1:A:24:LYS:HZ3	0.50	1.66	13	1
2:B:82:LEU:C	2:B:82:LEU:CD1	0.50	2.80	1	1
1:C:63:LEU:HD22	2:D:123:HIS:NE2	0.50	2.21	6	1
1:A:59:TYR:OH	1:C:63:LEU:HD11	0.50	2.06	15	1
2:D:82:LEU:HD23	2:D:82:LEU:H	0.50	1.64	8	2
1:A:14:ALA:HB1	2:B:113:LEU:HD23	0.50	1.83	5	17
2:B:131:LYS:O	2:B:134:THR:HG22	0.50	2.07	3	1
2:D:96:LEU:HD12	2:D:114:HIS:ND1	0.50	2.22	17	3
2:D:96:LEU:HD13	2:D:110:LEU:CD2	0.50	2.36	9	1
1:A:21:TYR:HA	1:A:24:LYS:NZ	0.50	2.21	13	1
2:B:132:ILE:HD11	1:C:55:ILE:HD11	0.50	1.84	20	1
1:A:40:VAL:CG1	1:A:44:PHE:CE2	0.50	2.95	7	6
1:C:21:TYR:O	1:C:25:LEU:N	0.50	2.45	15	13
2:D:96:LEU:HD11	2:D:113:LEU:HB2	0.50	1.83	1	2
1:A:22:ARG:HA	1:A:37:ILE:HD12	0.50	1.83	15	2
2:B:134:THR:HG22	2:B:135:LYS:CD	0.50	2.36	17	1
1:C:40:VAL:HG21	2:D:92:VAL:CG2	0.50	2.37	20	1
1:A:52:LEU:HD21	2:B:125:LEU:HB3	0.50	1.84	6	1
1:A:59:TYR:CD2	1:C:63:LEU:HD11	0.50	2.41	6	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
2:B:124:THR:HG22	2:B:128:LEU:HD11	0.50	1.84	18	3
2:B:96:LEU:HD13	2:B:110:LEU:CD2	0.50	2.37	10	2
1:A:46:SER:CB	2:B:129:TYR:CE1	0.50	2.95	19	11
1:C:26:SER:CB	1:C:34:ARG:HB2	0.50	2.37	20	4
1:A:61:VAL:HG13	1:C:61:VAL:HG12	0.50	1.84	19	1
1:C:48:LEU:HB3	2:D:129:TYR:CD1	0.49	2.42	14	5
1:C:14:ALA:HB2	2:D:116:VAL:HG21	0.49	1.83	12	2
1:C:49:PHE:O	1:C:52:LEU:CD2	0.49	2.60	4	2
1:C:48:LEU:HD12	1:C:48:LEU:C	0.49	2.27	16	7
1:C:39:ARG:HB3	2:D:88:ALA:HB1	0.49	1.83	17	1
1:A:36:SER:O	1:A:39:ARG:HG2	0.49	2.07	14	9
1:C:46:SER:CB	2:D:129:TYR:CE1	0.49	2.96	4	8
1:A:56:GLN:HE22	2:B:125:LEU:HD21	0.49	1.66	13	1
1:C:19:GLU:N	1:C:41:ILE:HD11	0.49	2.23	12	1
1:C:40:VAL:HG11	2:D:117:PHE:CE1	0.49	2.43	12	1
2:D:102:LEU:HD12	2:D:103:THR:HG23	0.49	1.84	5	19
1:A:24:LYS:O	1:A:24:LYS:HG2	0.49	2.07	13	1
1:A:33:LEU:HD22	2:B:98:GLU:OE2	0.49	2.08	14	2
1:A:48:LEU:HD13	1:A:48:LEU:C	0.49	2.28	6	2
2:B:82:LEU:HA	2:B:130:ASP:CG	0.49	2.29	20	3
1:C:26:SER:HB3	1:C:34:ARG:CD	0.49	2.38	17	4
1:C:43:ILE:HG21	2:D:126:LEU:HD23	0.49	1.84	13	2
1:A:64:LEU:N	1:A:64:LEU:CD2	0.48	2.71	12	11
1:C:25:LEU:HD22	1:C:30:ASP:CB	0.48	2.38	2	4
1:C:28:THR:CG2	1:C:29:GLU:N	0.48	2.76	7	20
1:C:55:ILE:HG22	1:C:59:TYR:CB	0.48	2.38	3	4
1:C:36:SER:O	1:C:39:ARG:CG	0.48	2.62	18	9
1:C:49:PHE:HA	1:C:52:LEU:HD21	0.48	1.86	4	1
2:B:102:LEU:HD12	2:B:103:THR:HG23	0.48	1.85	17	18
1:A:48:LEU:HG	2:B:129:TYR:O	0.48	2.08	6	3
2:D:82:LEU:N	2:D:82:LEU:CD1	0.48	2.76	13	2
2:D:95:SER:O	2:D:98:GLU:N	0.48	2.46	6	6
1:A:37:ILE:HG12	2:B:92:VAL:HG13	0.48	1.85	19	1
2:D:85:ALA:CB	2:D:126:LEU:HB3	0.48	2.38	3	5
2:B:129:TYR:CD1	2:B:129:TYR:C	0.48	2.86	7	1
1:A:26:SER:HB3	1:A:34:ARG:CD	0.48	2.39	14	2
2:B:96:LEU:HD13	2:B:110:LEU:HD22	0.48	1.83	10	1
2:D:82:LEU:HD12	2:D:130:ASP:HB3	0.48	1.85	18	2
1:A:28:THR:CG2	1:A:29:GLU:N	0.48	2.76	14	18
2:B:95:SER:O	2:B:98:GLU:N	0.48	2.47	5	7
2:B:96:LEU:CD2	2:B:110:LEU:HD23	0.48	2.39	17	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
1:A:49:PHE:HA	1:A:52:LEU:CD2	0.48	2.38	12	2
2:B:118:GLN:N	2:B:118:GLN:NE2	0.48	2.61	14	1
1:A:11:THR:HG22	1:A:44:PHE:HE1	0.48	1.67	17	2
1:A:37:ILE:HA	2:B:92:VAL:HG21	0.48	1.86	3	2
1:A:17:LEU:HD13	2:B:113:LEU:HD11	0.48	1.86	16	5
1:A:40:VAL:HG21	2:B:92:VAL:CG2	0.48	2.39	10	3
1:A:11:THR:CG2	1:A:44:PHE:CD1	0.48	2.96	1	1
1:C:25:LEU:HD12	2:D:99:ILE:CD1	0.48	2.39	6	2
1:C:48:LEU:CD2	2:D:129:TYR:O	0.48	2.62	4	6
2:D:82:LEU:O	2:D:85:ALA:HB3	0.48	2.09	15	1
1:C:39:ARG:CD	2:D:88:ALA:HB2	0.47	2.39	4	1
1:A:40:VAL:O	1:A:44:PHE:CD1	0.47	2.67	11	5
2:B:117:PHE:CD1	2:B:117:PHE:N	0.47	2.82	6	2
2:D:89:VAL:HG13	2:D:117:PHE:CG	0.47	2.43	15	2
2:D:96:LEU:CB	2:D:114:HIS:CE1	0.47	2.97	19	1
2:D:129:TYR:CD1	2:D:129:TYR:C	0.47	2.87	6	3
2:B:84:ALA:HA	2:B:87:ARG:HB3	0.47	1.86	16	1
1:C:26:SER:HB3	1:C:34:ARG:HB2	0.47	1.85	17	4
1:A:26:SER:OG	1:A:34:ARG:CG	0.47	2.63	19	1
1:C:35:SER:O	1:C:38:GLU:HG3	0.47	2.09	1	1
1:A:55:ILE:HD11	2:D:132:ILE:HG13	0.47	1.86	8	1
2:B:114:HIS:CD2	2:B:118:GLN:OE1	0.47	2.68	8	1
1:A:18:LEU:CB	1:A:37:ILE:HG23	0.47	2.38	16	1
1:A:35:SER:HA	1:A:38:GLU:CG	0.47	2.39	19	1
2:B:100:HIS:HB2	2:B:110:LEU:CD1	0.47	2.37	9	13
1:A:59:TYR:CE2	1:C:63:LEU:CD1	0.47	2.97	8	11
1:C:25:LEU:CD2	2:D:102:LEU:CD1	0.47	2.92	7	4
1:C:26:SER:OG	1:C:34:ARG:CD	0.47	2.63	7	4
1:C:40:VAL:O	1:C:44:PHE:CD1	0.47	2.68	15	6
2:B:93:LEU:CD1	2:B:118:GLN:NE2	0.47	2.78	4	8
1:C:36:SER:O	1:C:39:ARG:HG2	0.47	2.10	19	6
1:C:43:ILE:O	1:C:49:PHE:CG	0.47	2.68	17	7
1:C:52:LEU:N	1:C:52:LEU:CD1	0.47	2.77	6	1
1:A:22:ARG:HB3	1:A:37:ILE:HD13	0.47	1.87	16	3
1:C:50:GLN:CA	1:C:50:GLN:OE1	0.47	2.62	18	2
1:C:52:LEU:HD21	2:D:128:LEU:CB	0.47	2.40	15	1
1:C:36:SER:CB	2:D:92:VAL:HG22	0.47	2.39	14	2
2:D:114:HIS:O	2:D:118:GLN:NE2	0.47	2.48	17	10
1:A:21:TYR:HA	1:A:24:LYS:CE	0.47	2.39	13	2
1:C:40:VAL:CG1	1:C:44:PHE:CE2	0.47	2.98	20	3
1:C:22:ARG:HG3	1:C:23:SER:N	0.47	2.25	17	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
2:B:96:LEU:HD13	2:B:110:LEU:CB	0.47	2.40	8	7
2:B:114:HIS:CD2	2:B:115:SER:N	0.47	2.83	7	4
2:B:96:LEU:CB	2:B:114:HIS:CE1	0.47	2.97	19	2
1:A:22:ARG:HA	1:A:37:ILE:HD13	0.47	1.87	7	3
1:C:26:SER:OG	1:C:34:ARG:CG	0.47	2.63	16	2
1:A:63:LEU:CD1	1:C:59:TYR:CE2	0.46	2.98	14	10
2:B:93:LEU:HD11	2:B:118:GLN:NE2	0.46	2.25	2	6
1:C:40:VAL:HG12	1:C:44:PHE:CD1	0.46	2.45	2	2
2:D:89:VAL:CG1	2:D:117:PHE:HB3	0.46	2.40	17	9
1:C:48:LEU:HG	2:D:129:TYR:O	0.46	2.10	10	3
1:C:41:ILE:CG2	1:C:45:GLN:NE2	0.46	2.76	15	1
2:B:124:THR:HG22	2:B:128:LEU:CD1	0.46	2.41	1	1
1:A:25:LEU:CD1	2:B:99:ILE:HG12	0.46	2.41	4	6
1:A:18:LEU:HD13	1:A:40:VAL:HB	0.46	1.87	15	1
1:C:53:ILE:HG23	1:C:56:GLN:NE2	0.46	2.25	15	1
1:A:43:ILE:HD11	2:B:84:ALA:HB3	0.46	1.88	20	1
2:D:114:HIS:CE1	2:D:118:GLN:NE2	0.46	2.84	15	3
1:A:48:LEU:O	1:A:51:ALA:HB3	0.46	2.09	18	4
2:D:85:ALA:CB	2:D:126:LEU:CB	0.46	2.94	20	5
1:C:25:LEU:HD13	1:C:37:ILE:HD11	0.46	1.86	6	1
1:C:49:PHE:CE1	1:C:53:ILE:HD11	0.46	2.45	16	2
1:C:14:ALA:HA	2:D:113:LEU:HD21	0.46	1.87	13	15
1:C:21:TYR:CE1	2:D:105:SER:CB	0.46	2.97	13	3
1:C:43:ILE:HD11	2:D:84:ALA:HB3	0.46	1.87	2	1
1:C:52:LEU:CD1	2:D:129:TYR:N	0.46	2.79	12	7
1:A:59:TYR:CZ	1:C:63:LEU:CD1	0.46	2.98	5	1
1:C:34:ARG:HA	1:C:37:ILE:HD12	0.46	1.86	6	1
2:B:82:LEU:C	2:B:82:LEU:HD23	0.46	2.31	12	1
2:B:85:ALA:HB1	2:B:126:LEU:HD22	0.46	1.87	14	1
1:C:48:LEU:CD1	2:D:129:TYR:HA	0.46	2.41	11	6
1:C:40:VAL:CG1	1:C:44:PHE:CD1	0.46	2.98	2	3
1:A:14:ALA:HA	2:B:113:LEU:HD21	0.46	1.87	1	11
1:C:11:THR:HG22	1:C:44:PHE:HE1	0.46	1.68	9	2
2:D:96:LEU:HD13	2:D:110:LEU:HD22	0.46	1.85	9	2
1:A:59:TYR:CG	2:D:128:LEU:HD21	0.46	2.45	20	1
1:A:48:LEU:CD2	2:B:129:TYR:O	0.46	2.64	5	4
2:B:89:VAL:CG1	2:B:117:PHE:CD1	0.46	2.99	3	1
2:D:124:THR:HG22	2:D:128:LEU:CD1	0.46	2.41	6	1
1:A:59:TYR:CE2	1:C:63:LEU:HD12	0.46	2.46	10	1
2:D:96:LEU:HD13	2:D:110:LEU:HA	0.46	1.88	18	1
2:B:96:LEU:HB3	2:B:114:HIS:CE1	0.46	2.46	12	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:26:SER:OG	1:A:34:ARG:CD	0.46	2.64	14	2
2:D:114:HIS:CD2	2:D:118:GLN:NE2	0.46	2.84	5	2
2:B:120:GLN:O	2:B:123:HIS:CD2	0.46	2.68	13	2
2:B:82:LEU:HD23	2:B:130:ASP:HB3	0.46	1.87	10	1
2:B:85:ALA:CB	2:B:126:LEU:CB	0.45	2.94	6	2
1:A:52:LEU:HD21	2:B:128:LEU:HB3	0.45	1.88	8	2
1:A:15:LEU:CD1	1:A:41:ILE:HG23	0.45	2.42	11	1
2:D:120:GLN:O	2:D:123:HIS:CD2	0.45	2.70	14	1
2:B:128:LEU:HD22	1:C:55:ILE:HG23	0.45	1.85	20	1
2:B:84:ALA:O	2:B:88:ALA:CB	0.45	2.64	19	4
1:A:22:ARG:HB3	1:A:37:ILE:HD12	0.45	1.89	3	1
2:B:110:LEU:O	2:B:114:HIS:CD2	0.45	2.69	12	3
1:A:63:LEU:HD11	1:C:59:TYR:OH	0.45	2.10	12	1
1:C:49:PHE:HA	1:C:52:LEU:HD11	0.45	1.89	1	1
1:A:20:GLU:O	1:A:24:LYS:HG3	0.45	2.12	12	1
1:C:33:LEU:HD22	2:D:98:GLU:OE2	0.45	2.12	17	1
1:A:59:TYR:CE1	1:C:63:LEU:CD1	0.45	2.99	1	2
2:D:93:LEU:HD11	2:D:118:GLN:NE2	0.45	2.26	6	2
1:A:21:TYR:CZ	2:B:105:SER:CB	0.45	2.99	4	2
2:B:134:THR:O	2:B:135:LYS:CB	0.45	2.63	4	2
1:C:10:ASP:O	1:C:14:ALA:HB2	0.45	2.12	5	1
1:A:45:GLN:O	1:A:46:SER:C	0.45	2.55	11	1
2:B:82:LEU:HD23	2:B:82:LEU:C	0.45	2.32	11	2
2:B:89:VAL:CG1	2:B:117:PHE:HB3	0.45	2.41	14	3
1:C:40:VAL:CG1	1:C:44:PHE:CE1	0.45	2.99	17	2
2:D:110:LEU:O	2:D:114:HIS:CD2	0.45	2.70	16	2
2:B:96:LEU:HD12	2:B:114:HIS:HD2	0.45	1.71	17	1
2:B:99:ILE:O	2:B:103:THR:OG1	0.45	2.34	15	12
1:A:40:VAL:CG1	1:A:44:PHE:CD1	0.45	2.99	5	4
2:D:122:LEU:HG	2:D:126:LEU:HD11	0.45	1.88	13	4
1:C:63:LEU:CD2	2:D:123:HIS:CE1	0.45	3.00	6	1
2:B:128:LEU:CD2	1:C:59:TYR:CE2	0.45	3.00	6	2
2:D:96:LEU:HB3	2:D:114:HIS:CE1	0.45	2.47	16	2
1:A:50:GLN:OE1	1:A:53:ILE:HD12	0.45	2.11	5	1
1:C:26:SER:CB	1:C:34:ARG:CD	0.45	2.95	7	5
2:B:128:LEU:HD23	1:C:55:ILE:HD12	0.45	1.88	19	1
1:C:33:LEU:HD12	1:C:33:LEU:O	0.45	2.12	19	1
1:A:43:ILE:HD13	2:B:85:ALA:HA	0.45	1.89	1	1
1:C:36:SER:O	1:C:39:ARG:HB2	0.45	2.12	1	1
1:A:26:SER:CB	1:A:34:ARG:HB2	0.45	2.41	2	2
1:C:49:PHE:HE1	1:C:53:ILE:HD11	0.45	1.71	16	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:52:LEU:CD1	2:B:129:TYR:N	0.45	2.80	1	10
1:A:18:LEU:CB	1:A:41:ILE:CD1	0.45	2.95	15	6
1:A:14:ALA:O	1:A:18:LEU:HD12	0.45	2.12	17	3
1:C:11:THR:CG2	1:C:44:PHE:CD2	0.45	2.99	17	4
1:A:11:THR:CG2	1:A:44:PHE:CD2	0.45	2.99	11	1
1:A:43:ILE:HG23	2:B:129:TYR:HE2	0.45	1.69	11	2
2:D:84:ALA:O	2:D:88:ALA:CB	0.45	2.64	15	4
2:D:89:VAL:CG1	2:D:117:PHE:CG	0.45	3.00	7	2
1:C:48:LEU:HD13	1:C:48:LEU:C	0.45	2.32	5	5
2:B:83:LEU:HD11	2:B:87:ARG:HH11	0.45	1.72	6	2
2:D:122:LEU:HA	2:D:125:LEU:HD12	0.45	1.89	6	1
1:A:26:SER:CB	1:A:34:ARG:CD	0.45	2.95	14	5
1:A:40:VAL:CG1	1:A:44:PHE:CE1	0.45	3.00	12	2
1:A:15:LEU:CD2	1:A:44:PHE:HB3	0.44	2.41	7	8
1:C:25:LEU:HD21	2:D:102:LEU:CD1	0.44	2.42	17	3
1:C:20:GLU:O	1:C:24:LYS:HG3	0.44	2.12	16	3
2:D:96:LEU:CD1	2:D:114:HIS:CE1	0.44	2.99	20	1
1:C:15:LEU:HD12	1:C:41:ILE:HG23	0.44	1.90	1	1
2:D:83:LEU:HD12	2:D:87:ARG:HH11	0.44	1.71	11	3
1:A:26:SER:CB	1:A:31:ARG:HA	0.44	2.42	10	1
1:C:15:LEU:O	1:C:41:ILE:CD1	0.44	2.66	12	1
2:B:105:SER:O	2:B:106:SER:CB	0.44	2.65	10	8
1:C:40:VAL:HG13	1:C:44:PHE:CE1	0.44	2.48	1	2
2:D:113:LEU:O	2:D:117:PHE:CD2	0.44	2.71	13	9
1:C:27:GLN:OE1	1:C:31:ARG:NH1	0.44	2.51	12	11
1:A:22:ARG:CA	1:A:37:ILE:HD13	0.44	2.42	7	2
1:A:48:LEU:CD1	1:A:52:LEU:HD12	0.44	2.42	7	1
1:C:26:SER:OG	1:C:27:GLN:OE1	0.44	2.30	7	4
1:A:25:LEU:CD2	2:B:102:LEU:CD1	0.44	2.95	10	3
1:A:36:SER:HB2	2:B:91:GLN:NE2	0.44	2.28	1	1
2:D:123:HIS:CD2	2:D:124:THR:N	0.44	2.86	3	4
1:C:56:GLN:HE21	2:D:125:LEU:HD11	0.44	1.72	4	1
2:D:82:LEU:HD12	2:D:83:LEU:N	0.44	2.28	4	1
1:A:25:LEU:HD22	1:A:25:LEU:O	0.44	2.12	12	1
2:D:93:LEU:CD2	2:D:114:HIS:ND1	0.44	2.79	17	1
2:D:100:HIS:CD2	2:D:100:HIS:O	0.44	2.71	14	15
2:D:82:LEU:HD23	2:D:130:ASP:HB3	0.44	1.90	3	1
2:D:98:GLU:CD	2:D:102:LEU:HD21	0.44	2.33	6	6
1:A:44:PHE:O	1:A:49:PHE:CD1	0.44	2.71	5	1
2:D:114:HIS:O	2:D:118:GLN:N	0.44	2.51	7	5
2:B:123:HIS:CD2	2:B:124:THR:N	0.44	2.86	9	3

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models Worst	Total
2:B:118:GLN:NE2	2:B:118:GLN:CA	0.44	2.79	14	1
1:A:27:GLN:OE1	1:A:31:ARG:NH1	0.44	2.51	2	11
2:B:100:HIS:O	2:B:100:HIS:CD2	0.44	2.71	18	13
2:D:83:LEU:CG	2:D:84:ALA:N	0.44	2.81	3	4
1:C:18:LEU:HB2	1:C:41:ILE:CD1	0.44	2.43	11	5
1:C:48:LEU:O	1:C:48:LEU:HD13	0.44	2.13	6	1
2:D:127:ASP:OD1	2:D:128:LEU:N	0.44	2.51	12	1
2:D:100:HIS:CB	2:D:110:LEU:CD1	0.44	2.95	19	3
1:C:46:SER:CB	2:D:129:TYR:OH	0.44	2.66	20	1
1:A:43:ILE:HD13	2:B:85:ALA:CA	0.44	2.43	1	1
1:A:59:TYR:HE1	1:C:63:LEU:HD12	0.44	1.70	1	1
1:C:15:LEU:CD1	1:C:41:ILE:HG23	0.44	2.43	18	3
2:B:96:LEU:O	2:B:110:LEU:HD13	0.43	2.13	5	1
2:B:129:TYR:CD2	2:B:130:ASP:OD1	0.43	2.71	5	3
2:B:96:LEU:HD12	2:B:114:HIS:NE2	0.43	2.28	10	2
1:C:26:SER:HB2	1:C:34:ARG:HB2	0.43	1.90	3	1
2:D:85:ALA:HB1	2:D:126:LEU:C	0.43	2.33	3	1
1:C:49:PHE:HZ	2:D:122:LEU:HD11	0.43	1.73	6	1
1:C:18:LEU:HD13	1:C:40:VAL:CG1	0.43	2.43	8	1
2:B:93:LEU:HD13	2:B:118:GLN:NE2	0.43	2.28	16	1
1:A:56:GLN:HE22	2:B:125:LEU:HD11	0.43	1.73	7	1
2:B:113:LEU:O	2:B:117:PHE:CD2	0.43	2.71	18	4
1:A:21:TYR:CE1	2:B:105:SER:CB	0.43	3.02	10	1
1:C:22:ARG:HB2	1:C:37:ILE:HG21	0.43	1.90	14	1
1:A:57:GLU:O	1:A:58:PHE:CD1	0.43	2.71	9	7
2:B:96:LEU:CD1	2:B:114:HIS:CE1	0.43	3.00	10	1
1:A:39:ARG:HB3	2:B:88:ALA:CB	0.43	2.43	13	2
1:C:61:VAL:HG11	2:D:128:LEU:HD11	0.43	1.90	15	1
1:A:22:ARG:CB	1:A:37:ILE:HD13	0.43	2.43	16	1
2:D:91:GLN:CG	2:D:92:VAL:N	0.43	2.82	1	2
1:C:46:SER:OG	1:C:49:PHE:HB2	0.43	2.14	8	1
2:D:105:SER:O	2:D:106:SER:C	0.43	2.56	10	1
1:C:46:SER:OG	2:D:129:TYR:CE1	0.43	2.71	12	1
2:D:96:LEU:HD13	2:D:110:LEU:CA	0.43	2.43	18	1
1:C:31:ARG:O	1:C:34:ARG:HG2	0.43	2.14	19	1
2:B:82:LEU:HD22	2:B:130:ASP:CG	0.43	2.33	8	1
1:A:39:ARG:CB	2:B:88:ALA:CB	0.43	2.96	13	1
2:B:114:HIS:O	2:B:118:GLN:NE2	0.43	2.51	19	3
1:A:43:ILE:O	1:A:49:PHE:CG	0.43	2.72	10	3
1:A:38:GLU:HA	1:A:41:ILE:HG12	0.43	1.90	19	2
1:A:25:LEU:HD22	1:A:30:ASP:CB	0.43	2.44	14	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:C:50:GLN:OE1	1:C:53:ILE:HD12	0.43	2.14	9	1
1:A:21:TYR:CE1	2:B:105:SER:HB3	0.43	2.49	10	1
1:C:52:LEU:HD21	2:D:128:LEU:HB3	0.43	1.90	12	3
1:A:52:LEU:HD22	2:B:128:LEU:HD12	0.43	1.91	17	1
1:A:40:VAL:O	1:A:44:PHE:CD2	0.43	2.71	13	4
1:A:63:LEU:C	1:A:64:LEU:HD23	0.43	2.34	1	1
1:C:26:SER:OG	1:C:34:ARG:HD2	0.43	2.14	7	3
2:D:96:LEU:HD23	2:D:99:ILE:HD12	0.43	1.90	7	2
1:A:49:PHE:CE1	2:B:126:LEU:CD2	0.43	3.02	1	1
2:B:83:LEU:CG	2:B:84:ALA:N	0.43	2.82	2	3
2:B:96:LEU:O	2:B:99:ILE:HB	0.43	2.14	8	4
1:C:22:ARG:CG	1:C:34:ARG:HG2	0.43	2.44	4	1
1:C:39:ARG:CD	2:D:88:ALA:CB	0.43	2.97	4	1
2:B:93:LEU:HG	2:B:117:PHE:CD2	0.43	2.49	6	1
2:B:129:TYR:CE2	2:B:130:ASP:OD2	0.43	2.72	19	2
1:A:46:SER:OG	2:B:129:TYR:CE1	0.43	2.71	12	4
2:B:111:ASP:O	2:B:114:HIS:ND1	0.43	2.49	8	1
1:A:26:SER:OG	1:A:34:ARG:HD2	0.43	2.14	14	1
1:C:17:LEU:HD13	2:D:113:LEU:HD11	0.43	1.91	1	3
1:C:25:LEU:HD22	1:C:30:ASP:HB2	0.43	1.90	5	1
2:D:129:TYR:CE2	2:D:130:ASP:OD2	0.43	2.72	7	2
1:A:48:LEU:HD12	1:A:52:LEU:HD12	0.43	1.91	14	1
2:D:85:ALA:O	2:D:126:LEU:CD1	0.43	2.66	18	2
1:A:18:LEU:CD1	1:A:40:VAL:CG1	0.42	2.97	7	3
1:C:26:SER:O	1:C:31:ARG:HD2	0.42	2.13	7	1
1:A:36:SER:O	1:A:39:ARG:CG	0.42	2.67	10	2
2:B:114:HIS:O	2:B:118:GLN:N	0.42	2.52	13	1
1:C:24:LYS:O	2:D:103:THR:HG22	0.42	2.14	14	2
1:C:12:GLN:O	1:C:16:HIS:CG	0.42	2.72	10	3
1:C:19:GLU:O	1:C:22:ARG:CG	0.42	2.67	9	3
1:C:22:ARG:CG	1:C:34:ARG:CG	0.42	2.97	4	1
2:B:89:VAL:O	2:B:93:LEU:HB2	0.42	2.14	20	2
2:B:96:LEU:HD23	2:B:99:ILE:HD12	0.42	1.90	14	1
1:A:49:PHE:CA	1:A:52:LEU:HD23	0.42	2.41	6	1
2:D:93:LEU:HD11	2:D:117:PHE:HB2	0.42	1.91	13	2
1:C:25:LEU:CD1	2:D:99:ILE:HG12	0.42	2.44	5	3
1:A:18:LEU:CD2	2:B:92:VAL:CG1	0.42	2.95	6	1
1:A:25:LEU:HD21	2:B:102:LEU:CD1	0.42	2.44	14	2
1:A:22:ARG:HB2	1:A:34:ARG:CG	0.42	2.44	14	1
1:A:26:SER:O	1:A:31:ARG:HD2	0.42	2.14	14	1
2:B:125:LEU:O	2:B:129:TYR:CB	0.42	2.67	14	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:57:GLU:O	1:A:58:PHE:CG	0.42	2.73	1	5
1:C:57:GLU:O	1:C:58:PHE:CD2	0.42	2.73	1	8
1:C:18:LEU:CB	1:C:41:ILE:CD1	0.42	2.97	2	3
1:C:25:LEU:CD2	1:C:30:ASP:CB	0.42	2.97	2	2
2:D:105:SER:O	2:D:106:SER:CB	0.42	2.67	3	6
2:B:111:ASP:O	2:B:114:HIS:CD2	0.42	2.72	5	2
2:D:82:LEU:CD2	2:D:130:ASP:HB3	0.42	2.44	5	1
1:A:19:GLU:O	1:A:22:ARG:CG	0.42	2.67	12	3
1:A:22:ARG:CG	1:A:34:ARG:HG2	0.42	2.45	15	1
1:C:39:ARG:HD3	2:D:88:ALA:HB2	0.42	1.90	17	1
2:D:111:ASP:O	2:D:114:HIS:CD2	0.42	2.72	1	2
1:C:21:TYR:CE1	2:D:105:SER:HB3	0.42	2.49	19	4
2:D:114:HIS:CD2	2:D:115:SER:N	0.42	2.88	10	2
1:A:57:GLU:O	1:A:58:PHE:CD2	0.42	2.73	15	2
2:D:114:HIS:ND1	2:D:118:GLN:OE1	0.42	2.53	14	1
2:D:93:LEU:HD21	2:D:114:HIS:CA	0.42	2.40	2	2
1:C:23:SER:O	1:C:27:GLN:CG	0.42	2.68	3	1
1:C:52:LEU:HD22	1:C:52:LEU:N	0.42	2.30	4	1
1:A:39:ARG:NH1	2:B:91:GLN:OE1	0.42	2.53	6	2
2:D:84:ALA:HA	2:D:87:ARG:HB3	0.42	1.90	10	1
2:B:93:LEU:CD2	2:B:118:GLN:NE2	0.42	2.82	14	1
1:C:26:SER:OG	1:C:34:ARG:CB	0.42	2.67	9	1
1:C:26:SER:CB	1:C:31:ARG:HA	0.42	2.45	13	1
2:B:127:ASP:O	2:B:130:ASP:OD1	0.42	2.37	8	1
1:C:56:GLN:CD	2:D:125:LEU:HD21	0.42	2.35	13	1
1:A:21:TYR:CZ	2:B:105:SER:HB2	0.42	2.50	15	1
1:A:22:ARG:CG	1:A:34:ARG:CG	0.42	2.98	18	3
2:B:114:HIS:ND1	2:B:114:HIS:C	0.42	2.73	9	3
1:C:21:TYR:CE1	2:D:105:SER:HB2	0.42	2.50	14	2
1:A:22:ARG:HG3	1:A:23:SER:N	0.42	2.30	10	1
1:A:25:LEU:HD21	2:B:102:LEU:HD11	0.42	1.91	10	1
2:B:82:LEU:HD23	2:B:82:LEU:O	0.42	2.15	12	1
2:D:93:LEU:O	2:D:114:HIS:CE1	0.42	2.73	17	1
2:D:93:LEU:CD1	2:D:118:GLN:NE2	0.41	2.83	1	8
1:C:49:PHE:O	1:C:53:ILE:HG13	0.41	2.15	4	1
2:B:100:HIS:CB	2:B:110:LEU:CD1	0.41	2.96	9	5
1:C:21:TYR:CE1	2:D:105:SER:OG	0.41	2.73	7	1
1:A:61:VAL:HG12	1:C:59:TYR:HB3	0.41	1.91	20	1
2:D:114:HIS:ND1	2:D:114:HIS:C	0.41	2.73	1	2
1:C:12:GLN:HA	1:C:15:LEU:HD23	0.41	1.91	15	2
1:A:35:SER:O	1:A:38:GLU:HG2	0.41	2.15	5	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:C:46:SER:OG	2:D:129:TYR:CZ	0.41	2.73	13	2
1:C:12:GLN:O	1:C:16:HIS:HB2	0.41	2.14	11	1
1:A:21:TYR:CE1	2:B:105:SER:OG	0.41	2.73	12	2
2:B:85:ALA:CB	2:B:126:LEU:HB3	0.41	2.39	2	1
1:A:56:GLN:NE2	2:B:125:LEU:HD11	0.41	2.31	7	1
1:A:53:ILE:O	1:A:56:GLN:CG	0.41	2.69	8	1
1:A:52:LEU:HD21	2:B:128:LEU:CB	0.41	2.45	11	1
2:D:93:LEU:CD2	2:D:114:HIS:CG	0.41	3.02	17	1
1:C:17:LEU:CD1	2:D:113:LEU:CD1	0.41	2.97	15	4
2:B:84:ALA:C	2:B:86:GLU:H	0.41	2.18	4	1
1:C:63:LEU:CD1	2:D:124:THR:HG23	0.41	2.45	4	1
1:A:62:THR:HG22	1:C:60:GLU:HB2	0.41	1.91	5	1
2:D:87:ARG:O	2:D:91:GLN:N	0.41	2.52	5	1
2:B:86:GLU:O	2:B:90:SER:CB	0.41	2.69	8	1
1:A:43:ILE:O	1:A:49:PHE:CD2	0.41	2.73	10	1
2:B:116:VAL:O	2:B:122:LEU:CD2	0.41	2.65	12	1
1:C:37:ILE:O	1:C:41:ILE:CG1	0.41	2.68	12	1
1:C:8:LYS:HB3	1:C:53:ILE:HG21	0.41	1.90	16	1
1:C:15:LEU:CD2	1:C:44:PHE:HB3	0.41	2.46	1	5
1:A:62:THR:HG22	1:C:60:GLU:CG	0.41	2.45	5	1
1:A:48:LEU:HD22	2:D:132:ILE:CG2	0.41	2.45	14	1
2:B:122:LEU:O	2:B:126:LEU:CD1	0.41	2.69	17	1
1:A:18:LEU:HB2	1:A:41:ILE:CD1	0.41	2.46	1	2
1:A:46:SER:HB3	2:B:129:TYR:CE1	0.41	2.50	6	3
1:C:52:LEU:H	1:C:52:LEU:CD1	0.41	2.22	1	1
1:C:63:LEU:CD2	2:D:123:HIS:NE2	0.41	2.84	6	1
1:A:50:GLN:OE1	1:A:50:GLN:N	0.41	2.54	11	1
1:C:28:THR:CG2	1:C:29:GLU:H	0.41	2.28	13	1
2:B:114:HIS:ND1	2:B:118:GLN:OE1	0.41	2.54	20	1
1:A:63:LEU:HD21	1:C:59:TYR:OH	0.41	2.15	1	1
2:D:82:LEU:HB3	2:D:130:ASP:CB	0.41	2.46	4	1
2:B:128:LEU:O	2:B:132:ILE:CD1	0.41	2.69	8	1
1:A:17:LEU:HD22	1:A:21:TYR:OH	0.41	2.16	11	1
1:C:25:LEU:O	1:C:28:THR:CG2	0.41	2.69	19	1
1:A:39:ARG:HG3	2:B:88:ALA:CB	0.41	2.46	20	1
2:D:116:VAL:O	2:D:122:LEU:CD2	0.41	2.64	5	1
2:B:89:VAL:CG2	2:B:126:LEU:HD22	0.41	2.46	6	1
1:A:48:LEU:HB3	2:B:129:TYR:CD1	0.41	2.51	7	1
1:C:39:ARG:HB3	2:D:88:ALA:CB	0.41	2.46	12	1
1:C:40:VAL:O	1:C:44:PHE:CD2	0.41	2.73	12	1
2:D:129:TYR:CE2	2:D:130:ASP:OD1	0.41	2.73	16	2

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:C:46:SER:OG	1:C:49:PHE:CB	0.41	2.68	15	1
1:A:10:ASP:O	1:A:14:ALA:HB2	0.41	2.16	17	1
2:B:129:TYR:CE2	2:B:130:ASP:OD1	0.41	2.74	17	1
2:B:124:THR:O	2:B:128:LEU:HG	0.41	2.16	18	1
1:A:40:VAL:CG2	2:B:88:ALA:HB1	0.41	2.45	20	1
1:A:12:GLN:O	1:A:16:HIS:CD2	0.41	2.74	12	2
1:C:52:LEU:CD2	1:C:53:ILE:N	0.41	2.84	1	1
1:C:39:ARG:HG3	2:D:88:ALA:CB	0.41	2.46	2	1
1:A:17:LEU:O	1:A:21:TYR:CD1	0.41	2.74	3	1
1:C:22:ARG:HA	1:C:37:ILE:HD12	0.41	1.93	4	1
2:D:82:LEU:C	2:D:82:LEU:CD1	0.41	2.89	4	1
1:A:17:LEU:O	1:A:21:TYR:CG	0.41	2.73	5	2
1:C:48:LEU:O	1:C:51:ALA:CB	0.41	2.67	6	1
1:C:52:LEU:HB2	2:D:125:LEU:HD22	0.41	1.93	6	1
1:A:54:ASP:O	1:A:57:GLU:CG	0.41	2.68	7	1
1:C:18:LEU:HD11	2:D:117:PHE:CE1	0.41	2.51	8	1
1:C:49:PHE:HA	1:C:52:LEU:HD23	0.41	1.91	8	1
1:A:26:SER:OG	1:A:27:GLN:OE1	0.41	2.31	14	2
1:A:23:SER:O	1:A:27:GLN:CG	0.41	2.69	12	1
1:A:52:LEU:HA	1:A:55:ILE:HD12	0.41	1.92	12	1
1:A:39:ARG:CB	2:B:88:ALA:HB1	0.41	2.46	13	1
1:A:18:LEU:HB3	1:A:37:ILE:CG2	0.41	2.46	14	1
1:C:39:ARG:NH1	2:D:91:GLN:OE1	0.41	2.54	15	1
1:A:41:ILE:O	1:A:45:GLN:HG3	0.41	2.16	3	1
1:A:21:TYR:CZ	2:B:105:SER:HB3	0.41	2.51	4	1
2:B:117:PHE:HA	2:B:122:LEU:CD2	0.41	2.46	6	1
1:C:57:GLU:O	1:C:58:PHE:CD1	0.41	2.73	18	2
1:C:18:LEU:CD1	1:C:40:VAL:CG1	0.41	2.99	7	2
1:A:12:GLN:O	1:A:16:HIS:CG	0.41	2.74	10	1
2:D:114:HIS:CD2	2:D:118:GLN:OE1	0.41	2.74	10	1
2:B:128:LEU:HD21	1:C:59:TYR:CG	0.41	2.50	14	1
2:B:134:THR:O	2:B:135:LYS:HG2	0.41	2.16	15	1
2:B:96:LEU:HD13	2:B:110:LEU:HA	0.41	1.92	19	1
1:C:21:TYR:CZ	2:D:105:SER:HB2	0.41	2.51	19	1
2:B:128:LEU:HD22	1:C:55:ILE:HD13	0.40	1.93	1	1
2:D:89:VAL:O	2:D:93:LEU:HB2	0.40	2.16	1	1
1:C:57:GLU:O	1:C:58:PHE:CG	0.40	2.73	19	4
1:A:33:LEU:CD2	2:B:95:SER:OG	0.40	2.70	8	1
2:D:129:TYR:CD2	2:D:130:ASP:OD2	0.40	2.74	11	1
1:C:41:ILE:O	1:C:45:GLN:HG2	0.40	2.16	12	1
2:D:86:GLU:OE1	2:D:123:HIS:CG	0.40	2.75	15	1

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Atom-1	Atom-2	Clash(Å)	Distance(Å)	Models	
				Worst	Total
1:A:52:LEU:HD11	2:B:129:TYR:N	0.40	2.32	16	1
1:C:8:LYS:CD	1:C:8:LYS:C	0.40	2.90	16	1
1:C:52:LEU:HD11	2:D:128:LEU:C	0.40	2.36	19	1
2:D:122:LEU:HA	2:D:125:LEU:CD1	0.40	2.47	20	1
2:B:122:LEU:HG	2:B:126:LEU:HD11	0.40	1.93	6	1
1:C:25:LEU:CD2	2:D:102:LEU:HD13	0.40	2.46	7	1
1:A:17:LEU:CD1	2:B:113:LEU:CD1	0.40	2.98	8	2
1:C:49:PHE:C	1:C:52:LEU:HD23	0.40	2.36	8	1
2:D:93:LEU:HG	2:D:117:PHE:CB	0.40	2.46	9	1
1:C:63:LEU:C	1:C:64:LEU:HD23	0.40	2.36	15	1
1:C:52:LEU:HD11	2:D:129:TYR:N	0.40	2.31	17	1
1:A:35:SER:HA	1:A:38:GLU:HG2	0.40	1.92	4	1
1:C:54:ASP:O	1:C:57:GLU:CG	0.40	2.70	6	1
1:A:56:GLN:OE1	2:B:121:HIS:CG	0.40	2.74	7	1
2:D:114:HIS:ND1	2:D:118:GLN:NE2	0.40	2.70	8	1
2:D:114:HIS:O	2:D:118:GLN:HG2	0.40	2.16	13	1
1:C:33:LEU:HD11	2:D:95:SER:HB3	0.40	1.92	14	1
2:B:128:LEU:HD22	1:C:55:ILE:HD12	0.40	1.94	19	1
2:B:134:THR:O	2:B:134:THR:CG2	0.40	2.68	20	1
2:D:96:LEU:CD1	2:D:110:LEU:O	0.40	2.69	1	1
1:A:55:ILE:CG2	2:D:128:LEU:CD2	0.40	2.99	6	1
2:D:122:LEU:O	2:D:125:LEU:N	0.40	2.55	9	1
1:A:17:LEU:HD13	2:B:113:LEU:CD1	0.40	2.46	16	1
1:A:40:VAL:CG2	2:B:92:VAL:CG2	0.40	2.99	17	1
1:C:50:GLN:OE1	1:C:50:GLN:N	0.40	2.55	18	1
1:A:25:LEU:HD13	1:A:37:ILE:HD11	0.40	1.92	4	1
1:A:46:SER:CB	2:B:129:TYR:CZ	0.40	3.04	11	1
1:C:37:ILE:HG12	2:D:92:VAL:HG13	0.40	1.94	13	1
1:A:12:GLN:O	1:A:16:HIS:HB2	0.40	2.16	14	1
2:B:112:PHE:CE1	2:B:116:VAL:CG2	0.40	3.05	14	1
1:A:26:SER:CB	1:A:34:ARG:HD3	0.40	2.47	16	1

6.3 Torsion angles ⓘ

6.3.1 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 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	57/60 (95%)	48±1 (85±2%)	6±1 (11±2%)	3±1 (5±1%)	4	27
1	C	57/60 (95%)	48±1 (84±2%)	7±1 (12±2%)	2±0 (4±1%)	5	29
2	B	54/56 (96%)	49±1 (90±3%)	4±1 (7±3%)	2±1 (3±1%)	7	40
2	D	52/56 (93%)	48±1 (92±2%)	3±1 (5±2%)	1±0 (3±1%)	8	42
All	All	4400/4640 (95%)	3852 (88%)	386 (9%)	162 (4%)	6	34

All 16 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	29	GLU	20
1	C	29	GLU	20
2	D	106	SER	20
2	B	106	SER	19
1	A	26	SER	14
1	C	26	SER	11
2	D	105	SER	9
1	C	28	THR	9
2	B	105	SER	9
1	A	60	GLU	8
1	A	28	THR	6
1	C	60	GLU	6
1	A	46	SER	4
1	C	46	SER	3
2	B	135	LYS	3
2	B	86	GLU	1

6.3.2 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 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	56/58 (97%)	40±3 (71±6%)	16±3 (29±6%)	1	17
1	C	56/58 (97%)	40±2 (72±3%)	16±2 (28±3%)	2	19
2	B	51/51 (100%)	35±3 (68±5%)	16±3 (32±5%)	1	14
2	D	48/51 (94%)	34±2 (71±3%)	14±2 (29±3%)	2	18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
All	All	4220/4360 (97%)	2977 (71%)	1243 (29%)	1 17

All 148 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	12	GLN	20
1	A	15	LEU	20
1	A	25	LEU	20
1	A	61	VAL	20
1	A	64	LEU	20
2	B	83	LEU	20
2	B	96	LEU	20
2	B	98	GLU	20
2	B	102	LEU	20
2	B	113	LEU	20
1	C	12	GLN	20
1	C	15	LEU	20
1	C	61	VAL	20
1	C	64	LEU	20
2	D	83	LEU	20
2	D	96	LEU	20
2	D	98	GLU	20
2	D	102	LEU	20
2	D	113	LEU	20
1	C	25	LEU	19
2	D	118	GLN	19
1	A	63	LEU	18
2	B	118	GLN	16
1	C	63	LEU	16
1	A	8	LYS	14
1	A	47	ASN	14
1	C	46	SER	14
2	B	129	TYR	14
1	A	46	SER	13
2	B	135	LYS	13
1	C	47	ASN	13
1	A	7	ARG	12
2	D	131	LYS	12
2	B	114	HIS	12
1	C	27	GLN	12
2	B	86	GLU	11

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Mol	Chain	Res	Type	Models (Total)
1	C	48	LEU	11
2	D	108	LYS	11
1	A	32	GLN	11
1	C	7	ARG	11
2	D	129	TYR	11
2	B	82	LEU	10
2	B	136	SER	10
1	C	8	LYS	10
2	B	106	SER	10
2	D	95	SER	10
2	D	82	LEU	10
1	A	38	GLU	9
1	A	27	GLN	9
1	A	36	SER	9
2	B	108	LYS	9
1	C	22	ARG	9
1	C	32	GLN	9
1	A	44	PHE	8
2	B	112	PHE	8
2	B	131	LYS	8
1	C	52	LEU	8
2	D	126	LEU	8
2	D	123	HIS	8
2	B	119	ASP	8
1	C	60	GLU	8
1	A	30	ASP	8
1	C	44	PHE	8
1	C	56	GLN	8
2	D	86	GLU	8
1	A	48	LEU	7
2	B	95	SER	7
1	C	36	SER	7
1	C	54	ASP	7
2	D	104	ASP	7
2	D	114	HIS	7
2	B	120	GLN	7
2	B	127	ASP	7
2	D	119	ASP	7
1	A	31	ARG	7
2	B	130	ASP	7
1	A	56	GLN	7
2	D	94	ASP	7

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Mol	Chain	Res	Type	Models (Total)
1	A	52	LEU	7
2	D	120	GLN	7
1	A	13	ARG	6
1	A	35	SER	6
1	C	19	GLU	6
1	A	19	GLU	6
1	A	23	SER	6
1	A	24	LYS	6
2	B	107	GLU	6
2	D	106	SER	6
2	D	112	PHE	6
2	B	105	SER	6
2	B	126	LEU	6
2	D	111	ASP	6
2	B	123	HIS	6
2	B	115	SER	6
2	D	121	HIS	6
1	C	31	ARG	5
1	A	20	GLU	5
1	A	26	SER	5
1	A	54	ASP	5
1	C	30	ASP	5
1	A	10	ASP	5
1	A	22	ARG	5
1	C	35	SER	5
2	B	93	LEU	5
2	B	104	ASP	5
2	B	121	HIS	5
1	C	50	GLN	5
2	B	111	ASP	5
1	C	23	SER	4
1	C	20	GLU	4
1	C	26	SER	4
2	B	94	ASP	4
1	C	38	GLU	4
2	D	127	ASP	4
1	A	16	HIS	4
1	C	34	ARG	4
1	C	24	LYS	4
1	A	57	GLU	3
2	D	115	SER	3
2	B	90	SER	3

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Mol	Chain	Res	Type	Models (Total)
1	C	13	ARG	3
2	D	107	GLU	3
2	B	91	GLN	3
1	A	60	GLU	3
1	A	34	ARG	3
1	C	10	ASP	3
1	C	16	HIS	3
2	D	87	ARG	3
2	D	130	ASP	2
1	C	11	THR	2
2	D	105	SER	2
2	B	117	PHE	2
1	C	57	GLU	2
1	A	18	LEU	2
1	C	33	LEU	2
2	B	134	THR	1
1	A	62	THR	1
2	B	133	ASN	1
1	C	28	THR	1
2	D	90	SER	1
1	A	9	GLN	1
1	A	11	THR	1
1	A	50	GLN	1
1	A	17	LEU	1
1	A	28	THR	1
1	C	17	LEU	1
2	B	109	ASP	1
2	D	93	LEU	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 monosaccharides 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 ⓘ

There are no chain breaks in this entry.

7 Chemical shift validation (i)

No chemical shift data were provided