

Summary of integrative structure determination of Predicted model of tissue transglutaminase 2 (TG2) in complex with plasma fibronectin type I modules 7, 8 and 9 (FNI7-9) (PDB ID: 9A3Y | pdb_00009a3y, PDB-Dev ID: PDBDEV_00000219)

1. Model Composition	
1.1. Entry composition	- Protein-glutamine gamma-glutamyltransferase 2: chain(s) A (687 residues) - Fibronectin: chain(s) B (140 residues)
1.2. Datasets used for modeling	- Crosslinking-MS data, PRIDE: PXD043976 - Experimental model, PDB: pdb_00004pyg - De Novo model, Not available - Experimental model, PDB: pdb_00003ejh
2. Representation	
2.1. Number of representations	1
2.2. Scale	Atomic
2.3. Number of rigid and flexible segments	0, 2
3. Restraints	
3.1. Physical principles	Information about physical principles was not provided
3.2. Experimental data	- 1 unique CrossLinkRestraint: DSS, 1 crosslinks - 1 unique CrossLinkRestraint: DMTMM, 0 crosslinks - 1 unique CrossLinkRestraint: PDH, 0 crosslinks
4. Validation	
4.2. Number of ensembles	0
4.3. Number of models in ensembles	Not applicable
4.4. Number of deposited models	1
4.5. Model precision	Not available
4.6. Data quality	Data quality has not been assessed
4.7. Model quality: assessment of atomic segments	- Clashscore: 10.68 - Ramachandran outliers: 10 - Sidechain outliers: 97
4.8. Fit to data used for modeling	Satisfaction of crosslinks: 100.00%
4.9. Fit to data used for validation	Fit of model to information not used to compute it has not been determined
5. Methodology and Software	

1. 5.1. Method name	Refinement
5.2. Method type	Iterative Threading ASSEmbly Refinement
5.3. Method description	structural refinement of starting models guided by experimental crosslinks
2. 5.1. Method name	structure prediction
5.2. Method type	AI prediction of protein 3D structure from its amino acid sequence
5.3. Method description	structure prediction of FN type I modules 7-9
3. 5.1. Method name	satisfied/violated crosslinks identification
5.2. Method type	Validate measured chemical cross-links on a protein 3D structure
5.3. Method description	calculation of Euclidean distances between crosslinked residues
4. 5.1. Method name	calculation of accessible area
5.2. Method type	calculates the atomic accessible area when a probe is rolled around the Van der Waal's surface of a macromolecule
5.3. Method description	calculation of accessible area
5. 5.1. Method name	structure evaluation
5.2. Method type	composite scoring function which is able to derive both global (i.e. for the entire structure) and local (i.e. per residue) absolute quality estimates on the basis of one single model
6. 5.1. Method name	accessible interaction space
5.3. Method description	determine the number of complexes consistent with the restraints
7. 5.1. Method name	docking
5.2. Method type	data-driven biomolecular docking
5.5. Software	- I-TASSER (version Not available) - AlphaFold2 (version Not available) - Xwalk (version Not available) - NACCESS (version Not available) - QMEAN (version Not available) - DisVis (version Not available) - HADDOCK (version Not available)