

Summary of integrative structure determination of PTEN-4A model. Model restrained with crosslinking-MS data from "strained" conformation and CTT. RoseTTAFold-generated initial structure (PDB ID: 9A98 | pdb_00009a98)

1. Model Composition	
1.1. Entry composition	Phosphatidylinositol 3,4,5-trisphosphate 3-phosphatase and dual-specificity protein phosphatase PTEN, PTEN-4A variant: chain(s) A (403 residues)
1.2. Datasets used for modeling	- De Novo model, Not available - Crosslinking-MS data, PRIDE: PXD060469
2. Representation	
2.1. Number of representations	1
2.2. Scale	Atomic
2.3. Number of rigid and flexible segments	0, 1
3. Restraints	
3.1. Physical principles	Information about physical principles was not provided
3.2. Experimental data	- 1 unique CrossLinkRestrict: DSSO, 1 crosslinks - 1 unique CrossLinkRestrict: DHSO, 0 crosslinks
4. Validation	
4.2. Number of ensembles	1
4.3. Number of models in ensembles	17
4.4. Number of deposited models	17
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: 0.92-1.99 - Ramachandran outliers: 1-4 - Sidechain outliers: 0-1
4.8. Fit to data used for modeling	Satisfaction of crosslinks: 85.00-87.50%
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	Protein structure prediction and 4A mutation (S380A/T382A/T383A/S385A)

<i>5.2. Method type</i>	AlphaFold2, PyMOL
<i>5.4. Number of computed models</i>	1
2. <i>5.1. Method name</i>	Rosetta pre-relaxation
<i>5.2. Method type</i>	Rosetta relax protocol. Unrestrained. Lowest energy model of 200 used in next step
<i>5.4. Number of computed models</i>	200
3. <i>5.1. Method name</i>	Restrained modeling
<i>5.2. Method type</i>	Rosetta, crosslinking-MS distance restraints
<i>5.3. Method description</i>	The individual models were restrained with subsets of experimental crosslink data in order to parse out specific restraints that correspond to a particular model. The crosslink list table provides the full set of experimental data obtained and the crosslink restraint table identifies the subset of crosslink restraints used in the modeling.
<i>5.4. Number of computed models</i>	2000
<i>5.5. Software</i>	- AlphaFold 2 (version ColabFold v1.5.0) - Rosetta (version 2020.08) - Rosetta (version 3.12)