

Summary of integrative structure determination of CYP2E-CYP3A4 (distal side) complex (PDB ID: 9AAS | pdb_00009aas)

1. Model Composition	
1.1. Entry composition	- Cytochrome P450 2E1: chain(s) A (493 residues) - Cytochrome P450 3A4: chain(s) B (503 residues) - PROTOPORPHYRIN IX CONTAINING FE: chain(s) C [A], D [B]
1.2. Datasets used for modeling	- Crosslinking-MS data, PRIDE: PXD079247 - De Novo model, AlphaFoldDB: AF-P05181-F1-v6 - De Novo model, AlphaFoldDB: AF-P08684-F1-v6
2. Representation	
2.1. Number of representations	1
2.2. Scale	Atomic
2.3. Number of rigid and flexible segments	2, 0
3. Restraints	
3.1. Physical principles	Information about physical principles was not provided
3.2. Experimental data	- 1 unique CrossLinkRestraint: Other, 5 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: 0.00 - Ramachandran outliers: 2 - Sidechain outliers: 4
4.8. Fit to data used for modeling	Satisfaction of crosslinks: 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	Step 1
5.2. Method type	Manual selection of the initial pose

<i>5.3. Method description</i>	Selection of the initial pose for proper orientation of both molecules in the membrane and to position some of the surface-exposed cysteines of CYP2E1 in proximity to the TFMD-tagged regions of CYP3A4
2. <i>5.1. Method name</i>	Step 2
<i>5.2. Method type</i>	Restrained docking using HEX 8.0.0
<i>5.3. Method description</i>	Applied restrains: 15 deg. turning-angle range for both the receptor (CYP2E1) and the ligand (CYP3A4), and a 0 deg. twist range. Docking was based on the combined optimization of shape and DARS potential.
<i>5.4. Number of computed models</i>	100
3. <i>5.1. Method name</i>	Step 3
<i>5.2. Method type</i>	Restrained docking with HADDOCK 2.4
<i>5.3. Method description</i>	Active residues: CYP2E1 cysteine(s) closest to the contact region and the closest TFMD-tagged residues in CYP3A4. The passive residues were automatically selected within a 12 Å zone around the active residues.
<i>5.4. Number of computed models</i>	100
4. <i>5.1. Method name</i>	Step 4
<i>5.2. Method type</i>	Model refinement with AlphaFold-Multimer
<i>5.3. Method description</i>	The final, AlphaFold-refined model is characterized with ipTM score of 0.8748
<i>5.4. Number of computed models</i>	1
<i>5.5. Software</i>	- UCSF Chimera (version 1.19) - HEX 8.0.0 (version 8.0.0) - HADDOCK (version 2.4) - Unmasked version of AlphaFold-Multimer (version Not available)