Figures/ Preliminary results:

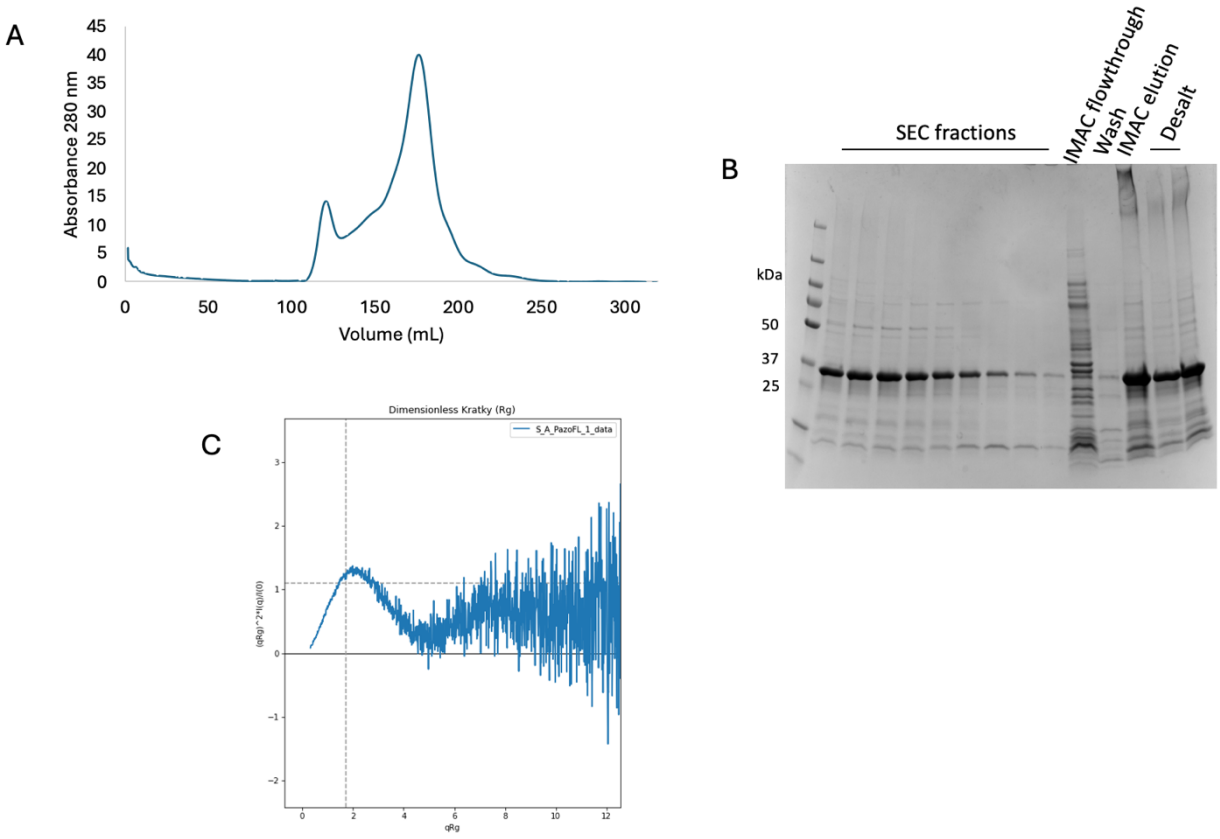


Figure 1. Purification and SAXS of *P. azotoformans* DUF3365 receptor. A) SEC of IMAC (immobilized metal-chelate affinity chromatography) purified receptor in LMNG detergent containing buffer. B) Representative SDS-PAGE gel of purified receptor. C) Dimensionless Kratky plot from SEC coupled SAXS

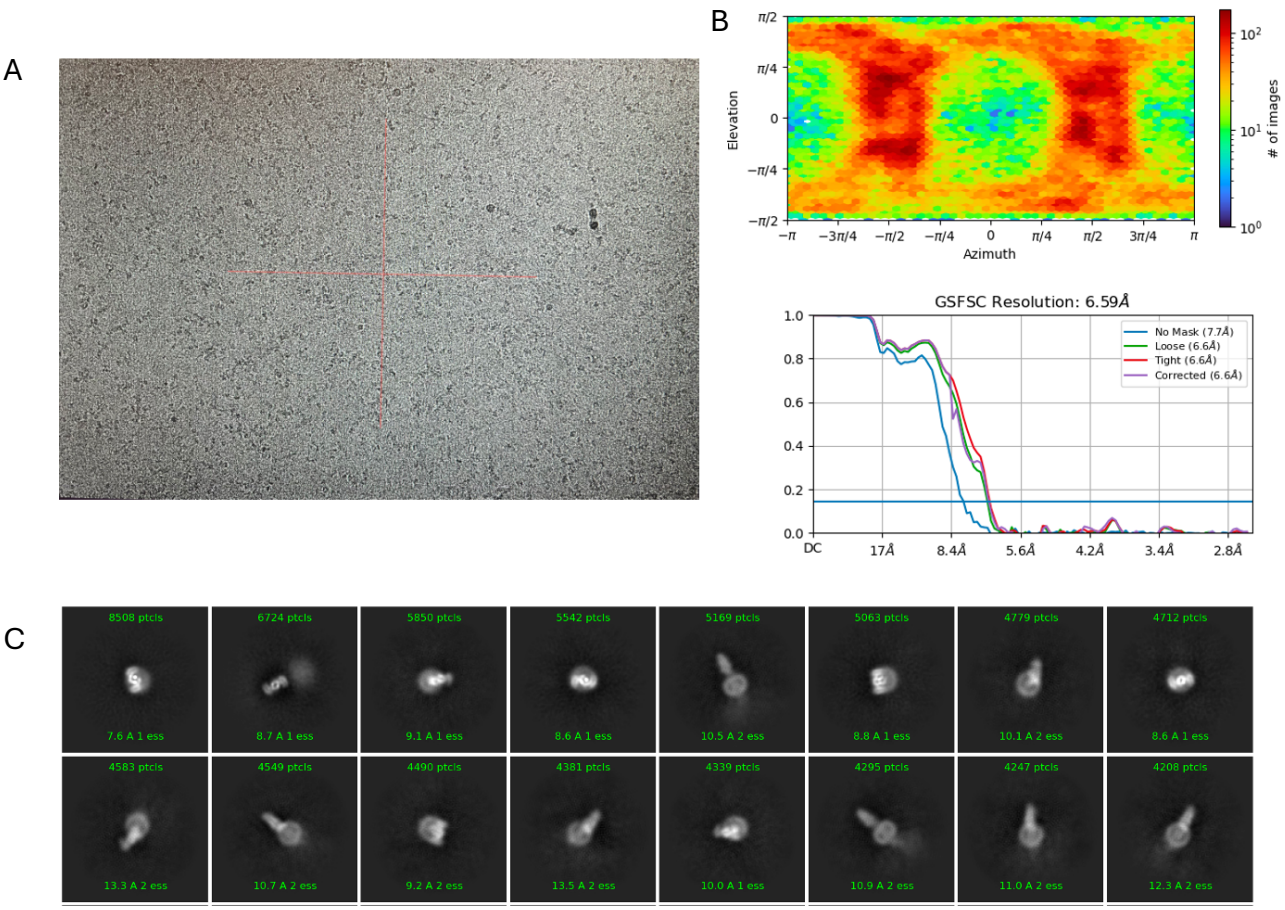


Figure 2. Preliminary cryo-EM of DUF3365 *P. azotoformans* receptor. A) 0.5 mg/ml of receptor applied to Quantifoil Cu 1.2/1.3 grids. B) Orientation selection map and FSC plot. C) Representative 2D classes from 169,767 particles.

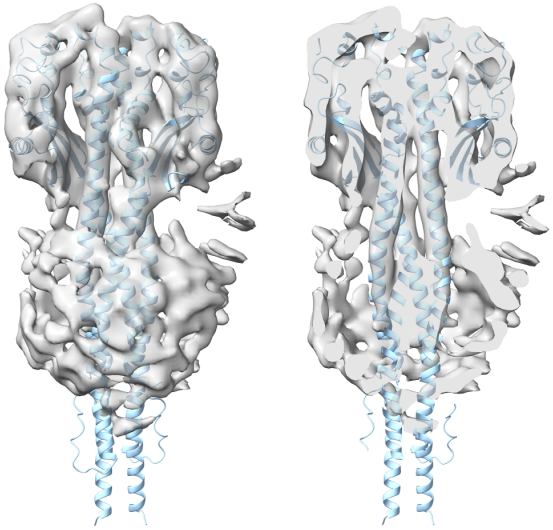
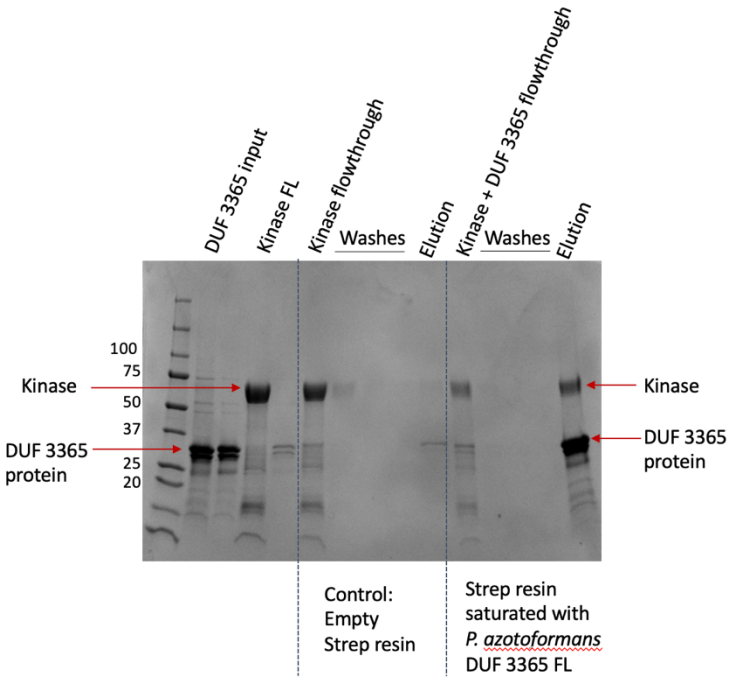


Figure 3. Density map aligned with AlphaFold2 model. Transmembrane helices are clearly apparent within the detergent micelle and the extracellular domain conforms to that expected for the dCAche Fold.

A



B

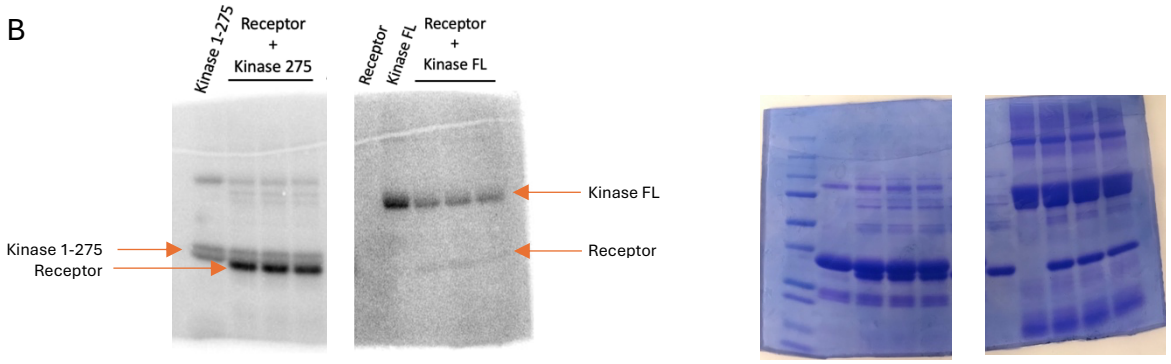


Figure 4. Interaction of *P. azotoformans* kinase AMN80074 with the DUF 3365 receptor. A) Pulldown assay with purified receptor as bait bound to Strep-Tactin XT resin and purified full-length kinase as prey shows interaction of the two proteins. B) Radioactive kinase assays with truncated and full-length kinase incubated with receptor (left) and coomassie-stained gel of the same (right). The receptor is phosphorylated by the kinase.