

Figure 1: Raw micrographs from MetRS on graphene grid.

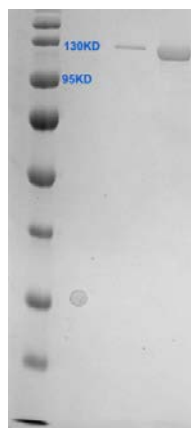


Figure 2: SDS PAGE shows the protein to be intact. (Lane 1: MW markers. Lanes 2 and 3: purified protein at two different concentrations.)

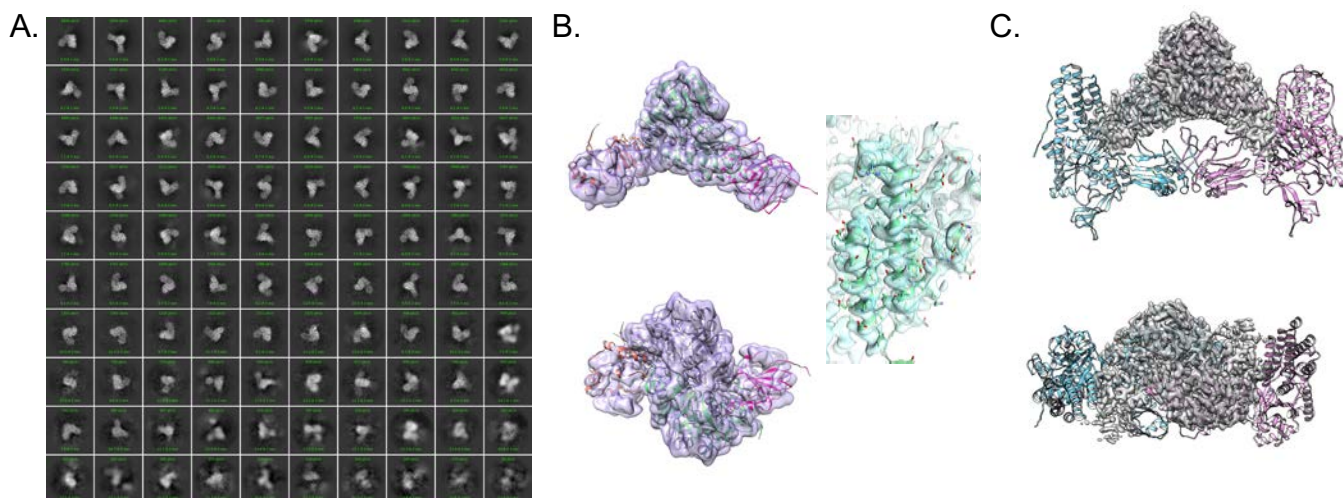


Figure 3: (A) The majority of class average show high-resolution features from the AGAT domain. (B) The AGAT domain shows high-resolution features that correlate to the known AGAT fold. Left top and bottom are related by a 90° rotation out of the plane of the page. Right, side chains are visible in this domain. (C) AlphaFold model of the full-length AGAT-MetRS chimera docked into 3.5 Å resolution map shows only AGAT domain density.

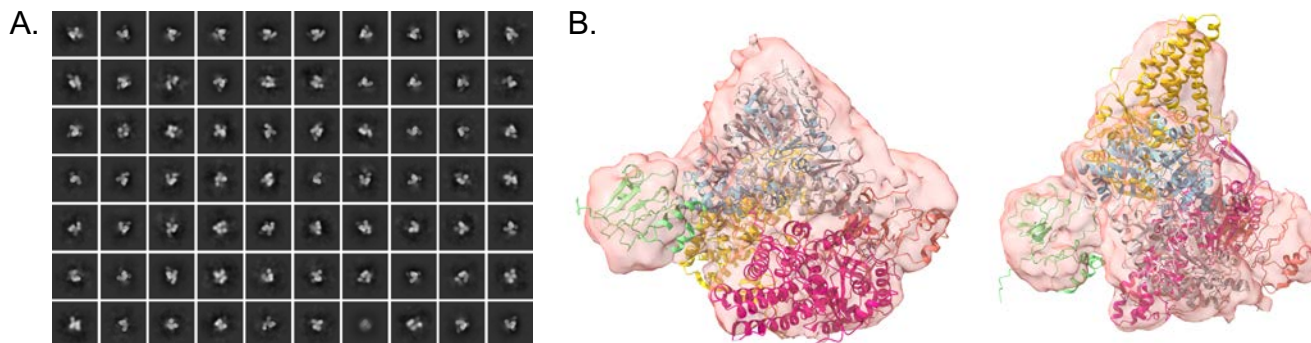


Figure 4: (A) Classes with additional features that correspond to the asymmetric MetRS domain.

(B) Low-resolution reconstruction showing the MetRS domains (dark pink and gold). Left and right are related by a 90° rotation out of the plane of the page.