



**Figure 1. Purification and preliminary cryo-EM studies of CP-AMPA receptors.** (A) The FSEC trace shows that the receptor sample is monodisperse. The GFP channel measures GluA1-containing AMPARs, while the mCherry signal track GluA2-containing AMPARs. (B) SDS-PAGE result shows the sample is high purity. (C) Left panel: Western blots show that the sample is comprised primarily of GluA1 and GluA4 subunits, with little GluA2 and GluA3. Right panel: Western blots show that the sample has auxiliary subunit TARPs (D) 2D class averages. (E) Left panel: Our initial low-resolution 3D map of GluA2-lacking CP-AMPA receptors is clearly distinct from previously imaged GluA2-containing CP-AMPA receptors. (Right panel, EMDB ID: EMD-7959).