



Figure 1 Structural and functional characterization of a plant cation-chloride cotransporter (CCC). A) An atlas of a plant CCC grid; B) A medium magnification view of the same grid. C) A representative cryo-EM micrograph of the plant CCC. D) The transmembrane and C-terminal domains of AlphaFold-predicted plant CCC structure are separately docked into our initial medium resolution cryo-EM map; the AlphaFold only predicts a structure for a single subunit, not the dimeric architecture revealed by our initial map. E) The plant CCC transports KCl or NH₄Cl when expressed in insect cells. The wildtype CCC1 catalyzes robust Cl⁻ influx as indicated by quench of fluorescence of a Cl⁻-sensitive YFP; YFP alone and a loss-of-function CCC mutant exhibit no Cl⁻ influx. F) The plant CCC transports KCl (or NH₄Cl), but not NaCl.