



**Figure S8** Mutation of the aromatic finger compromises the ability of Beclin 1 ECD to deform membrane. (A) The hexa-histidine tag had no impact on the membrane deformation activity of Beclin 1. To rule out potential problems associated with the hexa-histidine tag, we prepared untagged Beclin 1 ECD and examined its association with liposomes using cryo-EM analysis. The results shown here are qualitatively the same as those for the hexa-histidine tagged Beclin 1 ECD (see Figure 4A-I in the main

text). The arrowheads indicate areas of membrane deformation. However, lack of the hexa-histidine tag no longer allows visualization of the nanogold particles linked to Ni<sup>2+</sup>-NTA. **(B)** Mutation of the aromatic finger markedly reduced the ability of Beclin 1 ECD to deform the liposomes. The average hydrodynamic radius of the liposomes, as an indicator of liposome deformation, was measured every five minutes following incubation with WT or mutant (F359D/F360D/W361D) Beclin 1 ECD.