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## **Supplemental Material**

**Supplemental Figure 1. Large p62 clusters in ATG KO cell lines colocalize with TAX1BP1 (A)** Confocal imaging of endogenous p62 and TAX1BP1 in WT and ATG5, ATG9A and ATG13 KO HCT-116 lines. **(B)** Quantification of endogenous p62 puncta size from the experiment in panel A. Quantitation is from 3 replicates with error bars representing SD. *P*-values were calculated using a two-tailed student *t*-test for pair-wise comparison. **(C)** Quantification of endogenous TAX1BP1 puncta size from the experiment in panel A. Quantitation is from 3 replicates with error bars representing SD. *P*-values were calculated using a two-tailed student *t*-test in panel A. Quantitation is from 3 replicates with error bars representing SD. *P*-values were calculated using a two-tailed student *t*-test for pair-wise comparison.

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Supplemental Figure 2. ATG9A accumulates at p62 condensates in the absence of FIP200 (A) Confocal imaging of endogenous TAX1BP1 and endogenously HA-tagged ATG9A in HCT-116 cells treated with or without 1 uM Wortmannin for 4 hours (scale bar =  $10 \,\mu$ m) (B) Quantification of ATG9A-HA and FIP200 colocalization by Pearson's coefficient. Quantitation is from 3 replicates with error bars representing SD. *P*-values were calculated using a two-tailed student *t*-test for pair-wise comparison

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**Supplemental Figure 3. Artificial condensates composed of 6X-ubiquitin and OPTN recruit ATG9A.** U2OS cells stably expressing snap-ATG9A were transiently transfected with 6x-ubiquitin and mutant OPTN-SE. Imaging of SNAP, BFP2, and eGFP was done 1 frame/s.