

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: List of *Drosophila* protein pairs that comprise the positive reference set (PRS) or the random reference set (RRS).

File Name: Supplementary Data 2

Description: Lit-BM-16, a list of protein pairs in the literature for which multiple lines of evidence suggest a binary interaction (built in 2017 based on annotations available through 2016).

File Name: Supplementary Data 3

Description: Lit-BM-20, a list of protein pairs in the literature for which multiple lines of evidence suggest a binary interaction (built in 2021 based on annotations available through 2020).

File Name: Supplementary Data 4

Description: Lit-BS, a list of protein pairs in the literature for which only one line of evidence suggests a binary interaction.

File Name: Supplementary Data 5

Description: FlyBi dataset, the full list of protein pairs that were positive in one or more of the four all-by-all yeast two-hybrid screens described in this study.

File Name: Supplementary Data 6

Description: Results of Mammalian Protein-Protein Interaction Trap (MAPPIT) analysis.

File Name: Supplementary Data 7

Description: Lists of interactors with known autophagy components (list 1) and extensions of that list based on interactions in the FlyBi dataset (lists 2 and 3).

File Name: Supplementary Data 8

Description: Results of RNAi screens for autophagy-related phenotypes for the putative autophagy network (sheet 1) or a random set (sheet 2). Columns D and E report phenotypes observed in the *Atg1* over-expression modifier assay in the adult eye. Columns F and G report phenotypes observed in the mCherry-Atg8 distribution assay in the larval fat body. NIG, National Institute of Genetics of Japan collection RNAi fly stocks. TRiP, Transgenic RNAi Project collection RNAi fly stocks. VDRC, Vienna *Drosophila* Research Center collection RNAi fly stocks.

File Name: Supplementary Data 9

Description: Sequences of primers used to PCR amplify open reading frames (ORFs) from Berkeley *Drosophila* Genome Project clone resource for production of the FlyBi ORF clone resource.