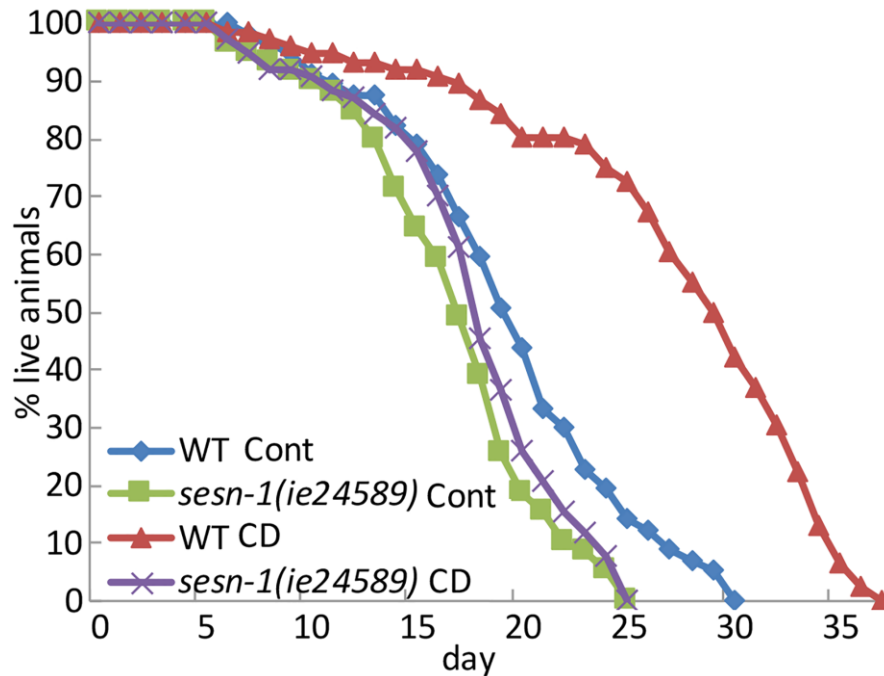
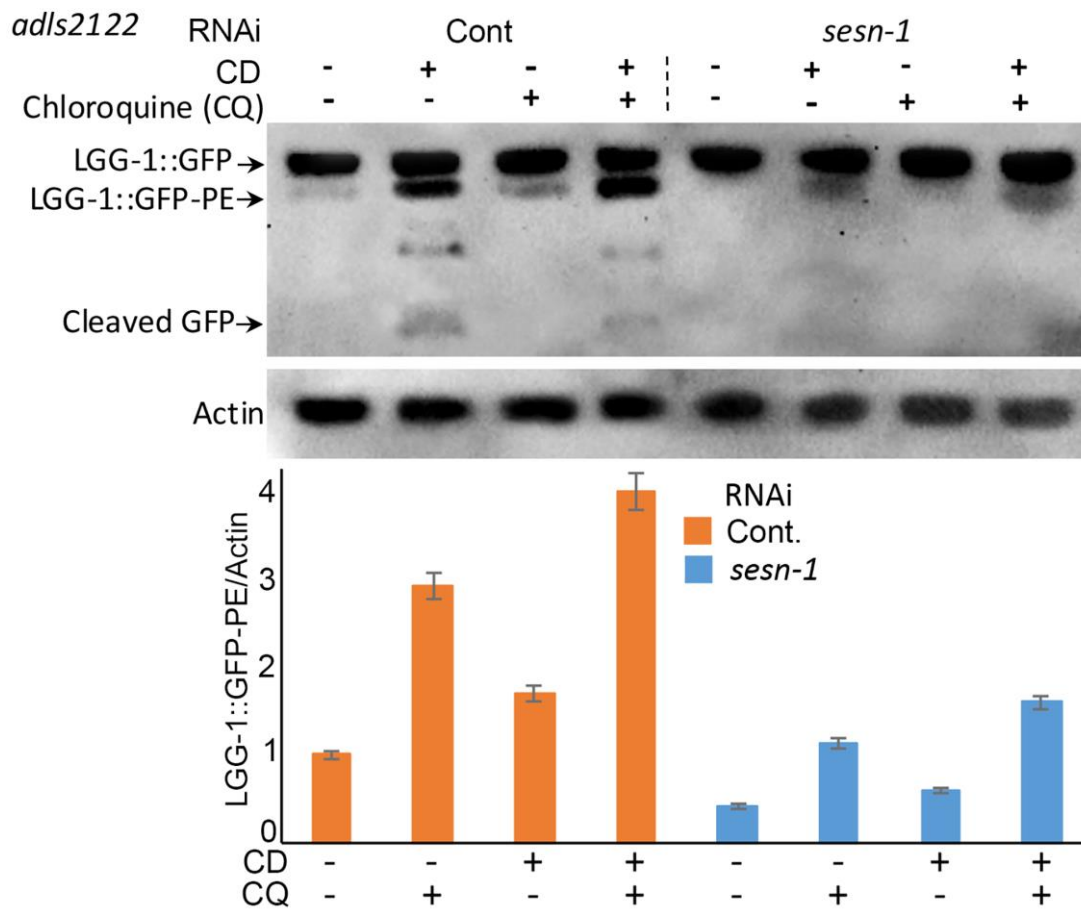


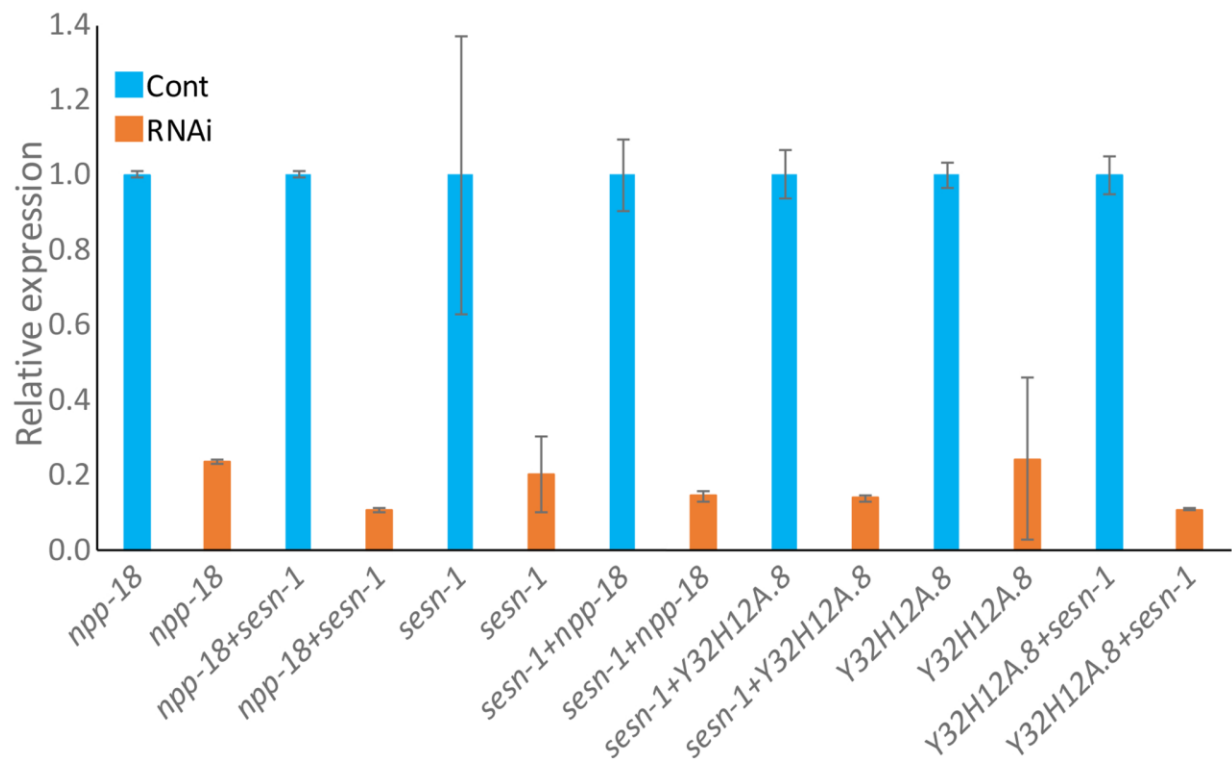
## SUPPLEMENTARY FIGURES



**Supplementary Figure 1. *C. elegans* lifespan extension under CD is modulated by *sesn-1*.** The lifespan of WT and *sesn-1(ie24589)* strain nematodes was assessed after plating animals on control ( $n = 57$  WT,  $n = 57$  *sesn-1(ie24589)*) or axenic media ( $n = 76$  WT,  $n = 77$  *sesn-1(ie24589)*). The mean life expectancy of WT was  $19.9 \pm 0.74$  days in control conditions and  $27.9 \pm 0.82$  days in starvation conditions,  $p > 0.001$ . The mean lifespan of *sesn-1(ie24589)* was  $17.2 \pm 0.59$  days in control conditions and  $18.1 \pm 0.53$  days in starvation conditions,  $p < 0.05$ .



**Supplementary Figure 2. Chloroquine treatment leads to increased autophagosome accumulation in *C. elegans* in a *sesn-1*-dependent manner.** Control *adls2122* and *adls2122; sesn-1(RNAi)* nematodes were initially exposed to chloroquine and then shifted to CD conditions. The autophagosomal fraction of GFP::LGG-1 was assessed using immunoblot densitometry. All bar graphs represent blot intensity normalized to actin.



**Supplementary Figure 3. qPCR validation of RNA interference targeting *sesn-1*, *npp-18*, and *Y32H12A.8* in WT and *sesn-1(ok3157)* nematodes.** All bar graphs represent relative gene expression normalized to the *top-1* mRNA.