Supplementary Information

Supplementary figures

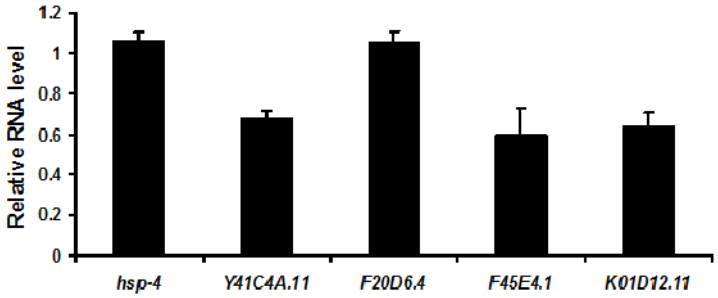

Figure S1. Expression of XBP-1-mediated genes in eggs obtained from WT and *octr-1(ok371)* one-day old adult animals. qRT-PCR analysis of *hsp-4, Y41C4A.11, F20D6.4, F45E4.1* and *K01D12.11* expression in eggs of *octr-1(ok371)* relative to WT animals exposed to *P. aeruginosa* PA14. n=3 independent experiments; error bars represent SEM.

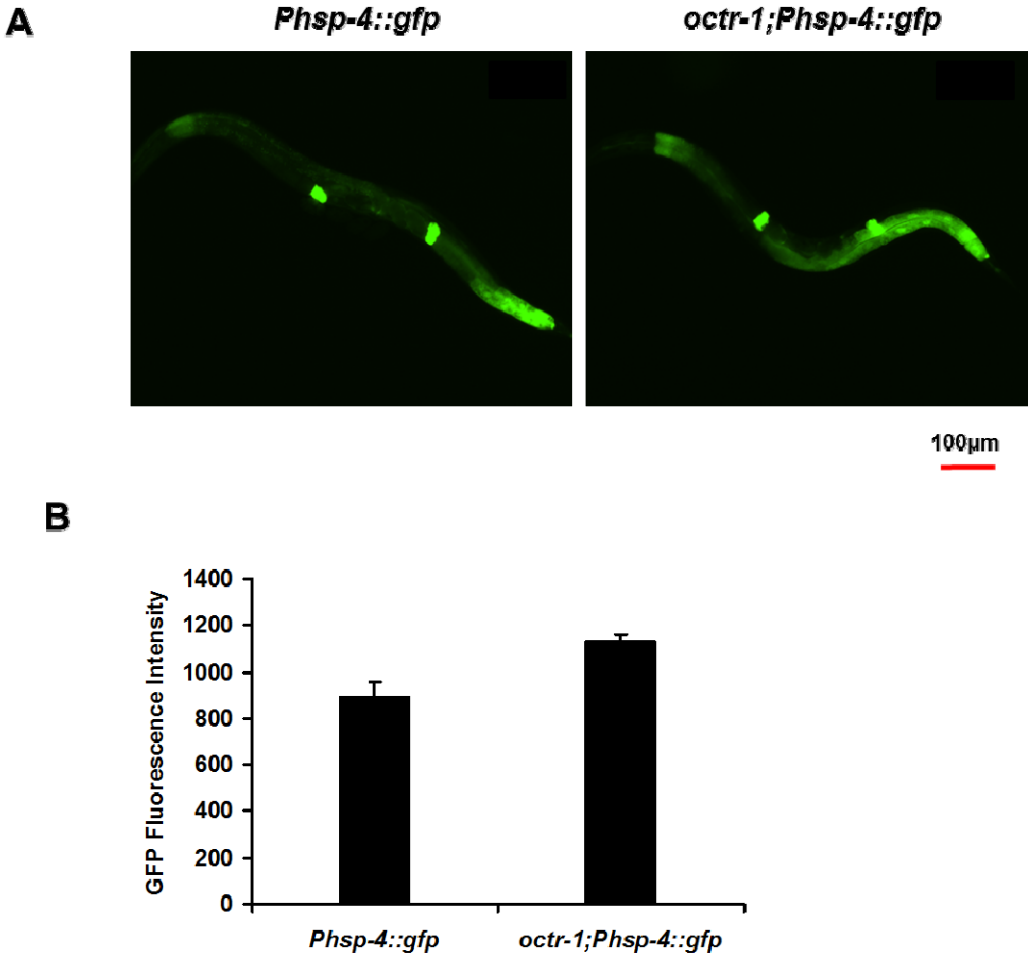

Figure S2. Loss of OCTR-1 signaling enhances the activation of XBP-1-mediated UPR pathway. (A). Images of *Phsp-4::GFP(zcIs4)* and *octr-1(ok371);Phsp-4::GFP(zcIs4)* one-day old animals exposed to *E. coli* OP50. Animals that best represent the fluorescence level of the population were shown. (B). GFP quantification from *Phsp-4::GFP(zcIs4)* and *octr-1(ok371);Phsp-4::GFP(zcIs4)* one-day old animals exposed to *E. coli* OP50. Binary mean intensity of the region of interest (ROI) that corresponds to an entire animal was measured by NIS-Elements AR 3.2 software. N=10-20, error bars represent SEM. *octr-1(ok371);Phsp-4::GFP(zcIs4)* versus *Phsp-4::GFP(zcIs4)* on *E. coli* OP50: $P<0.05$.

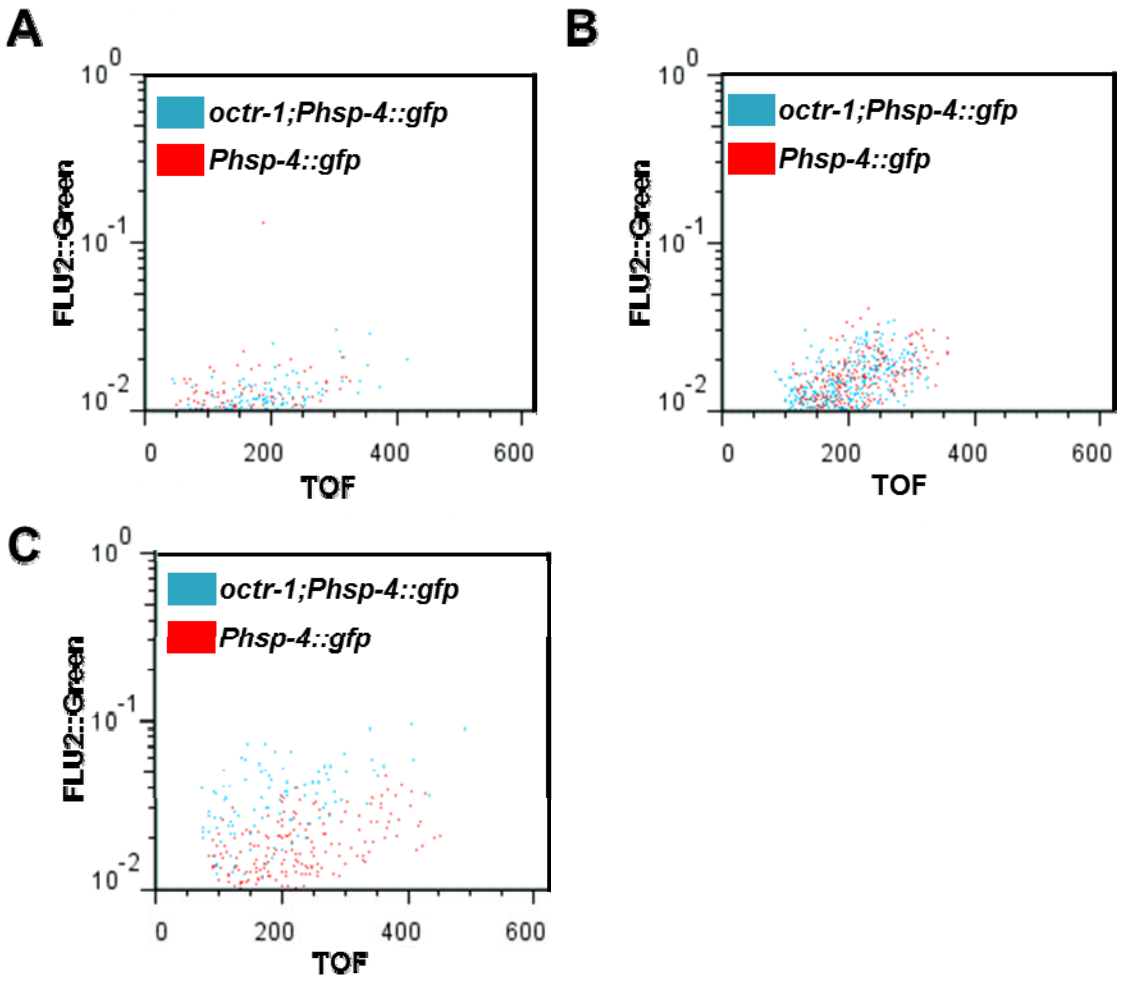

Figure S3. Expression levels of the transgenic transcriptional reporter *Phsp-4::GFP(zcIs4)* and *octr-1;Phsp-4::GFP(zcIs4)* exposed to *P. aeruginosa*. GFP fluorescence intensity (FLU2) was plotted against animal size, measured as time of flight (TOF). Each dot represents an individual animal. (A). L3 animals. *Phsp-4::GFP(zcIs4)* versus *octr-1;Phsp-4::GFP(zcIs4)*: P=1.0. (B). L4 animals. *Phsp-4::GFP(zcIs4)* versus *octr-1;Phsp-4::GFP(zcIs4)*: P=1.0. (C). Young adult animals. *Phsp-4::GFP(zcIs4)* versus *octr-1;Phsp-4::GFP(zcIs4)*: P<0.0001.

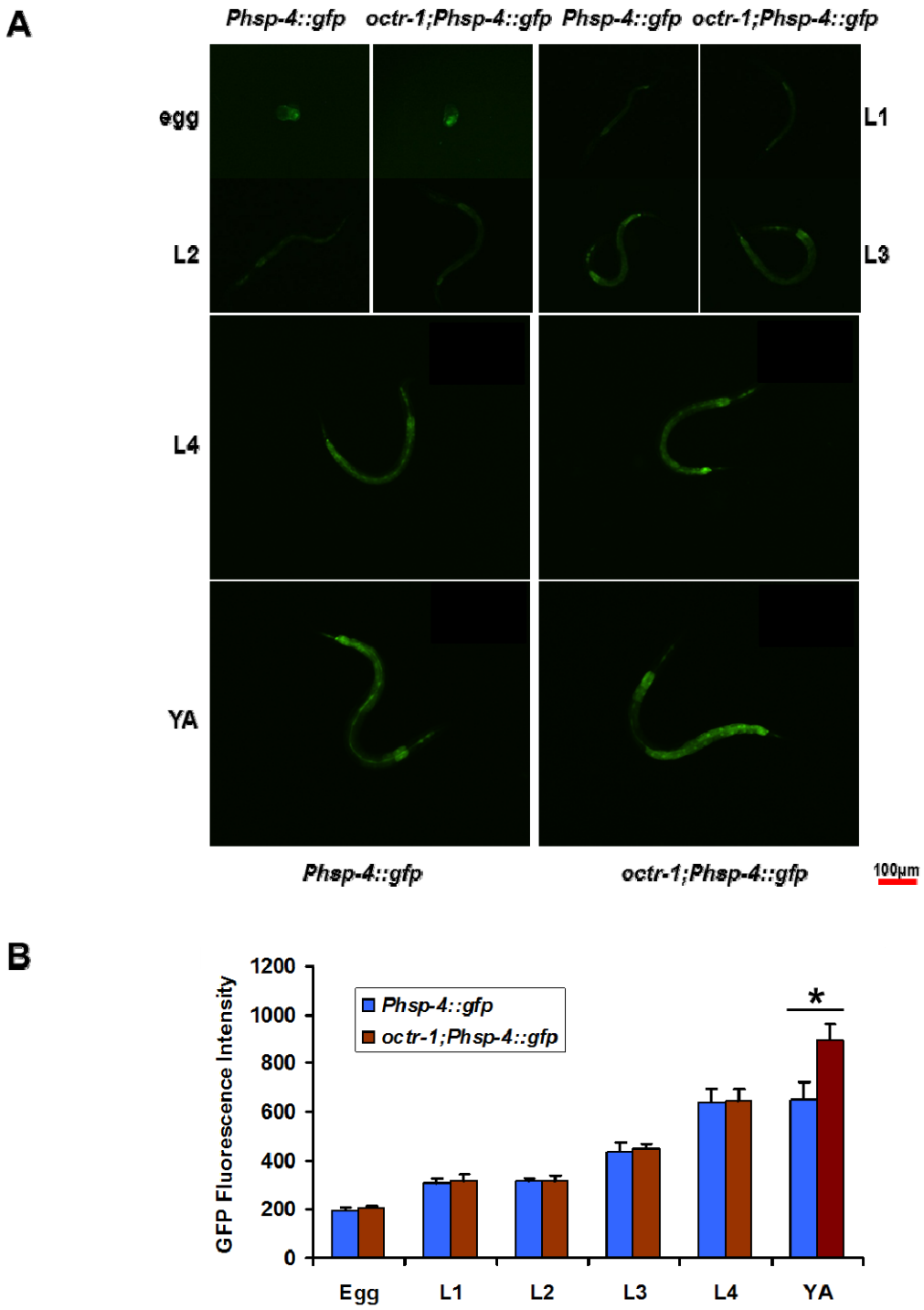

Figure S4. OCTR-1 controls XBP-1-mediated UPR in uninfected young adult animals. (**A**). Images of *Phsp-4::GFP(zcIs4)* and *octr-1(ok371);Phsp-4::GFP(zcIs4)* egg, L1, L2, L3, L4, and young adult (YA) animals grown on *E. coli* OP50. Animals that best represent the fluorescence level of the population were shown. (**B**). GFP quantification of *Phsp-4::GFP* from *Phsp-4::GFP(zcIs4)* and *octr-1(ok371);Phsp-4::GFP(zcIs4)* egg, L1, L2, L3, L4 and YA animals exposed to *E. coli* OP50. Binary mean intensity of the region of interest (ROI) that corresponds to an entire animal was measured by NIS-Elements AR 3.2 software. N=10-20, error bars represent SEM. Asterisk indicates significant difference. *octr-1(ok371);Phsp-4::GFP(zcIs4)* YA versus *Phsp-4::GFP(zcIs4)* YA on *E. coli* OP50: $P<0.05$.

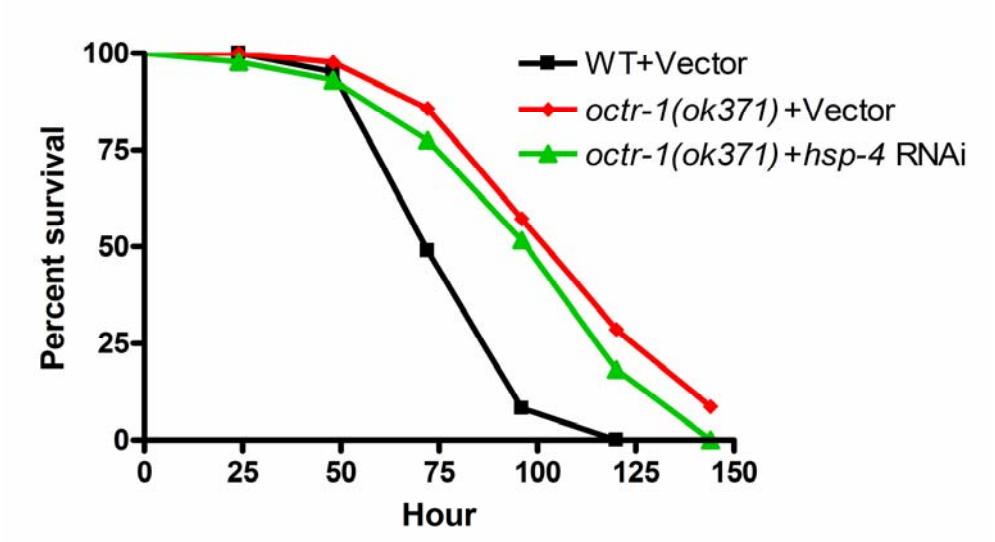

Figure S5. *hsp-4* RNAi does not suppress the resistant phenotype of *octr-1(ok371)* exposed to *P. aeruginosa* PA14. WT and *octr-1(ok371)* animals grown on double-stranded RNA (dsRNA) for vector control or dsRNA for *hsp-4* were exposed to *P. aeruginosa* PA14 and scored for survival over time. *P* values are relative to *octr-1(ok371)*+Vector: WT+Vector ($p<0.0001$), *octr-1(ok371)+hsp-4* RNAi ($P>0.05$). Shown is a representative assay of two independent experiments.