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.