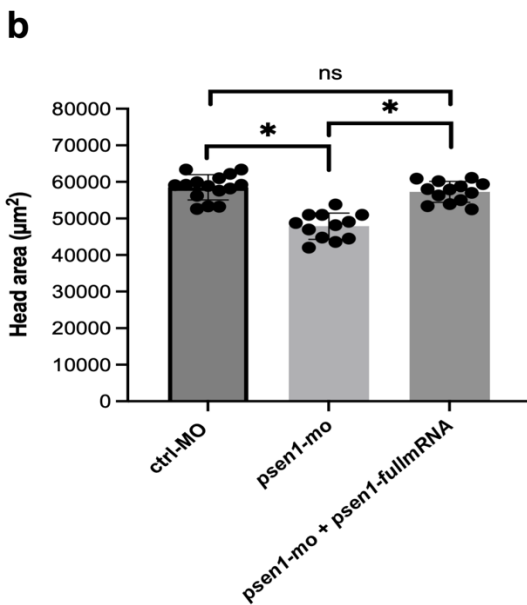
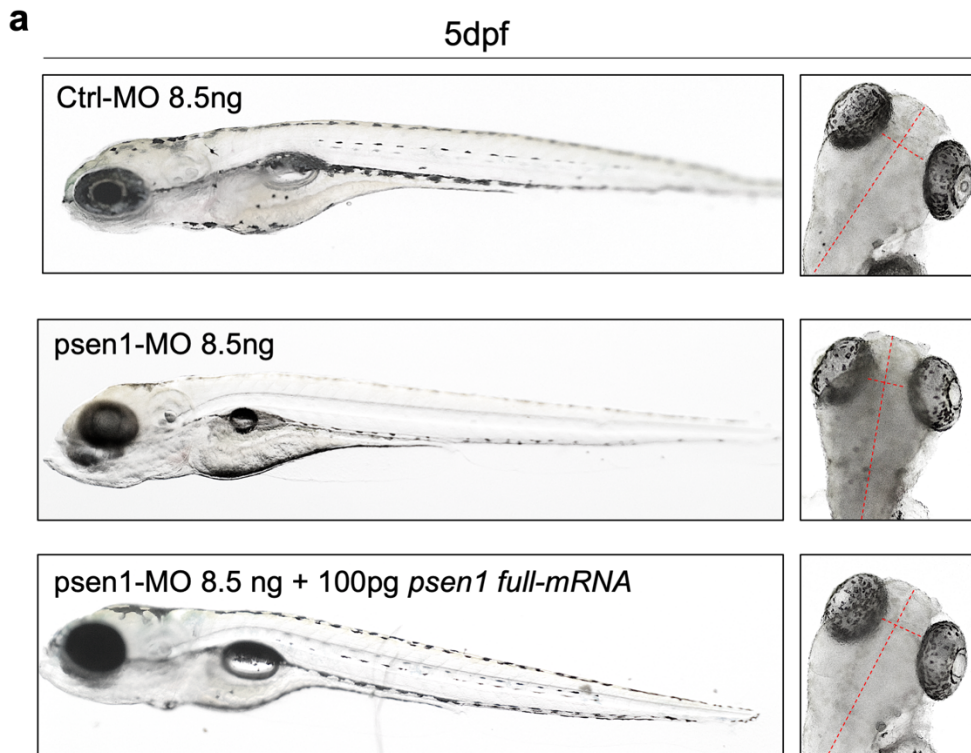
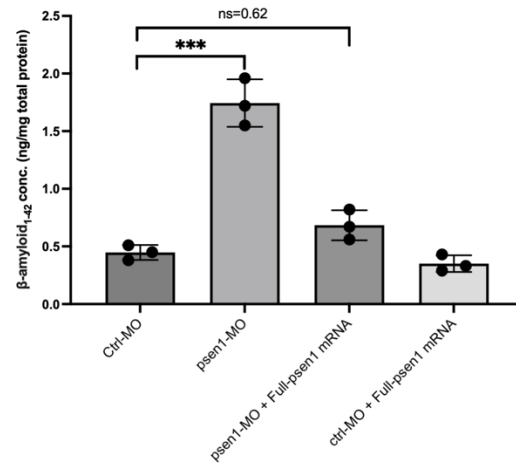
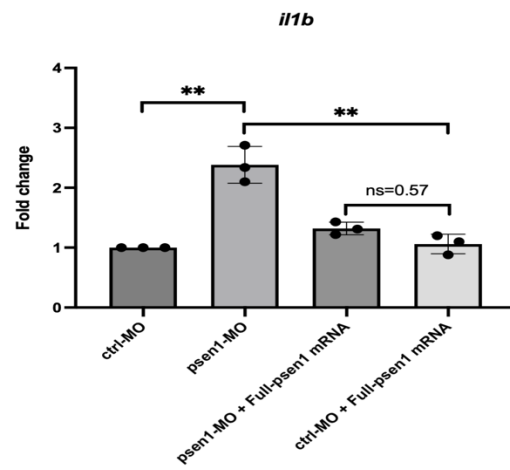
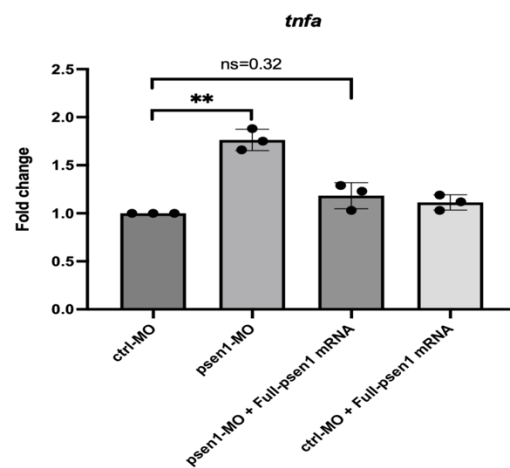


Supplementary figure 1



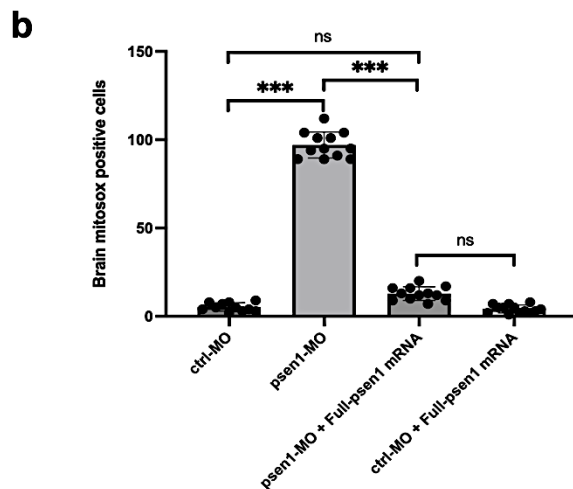
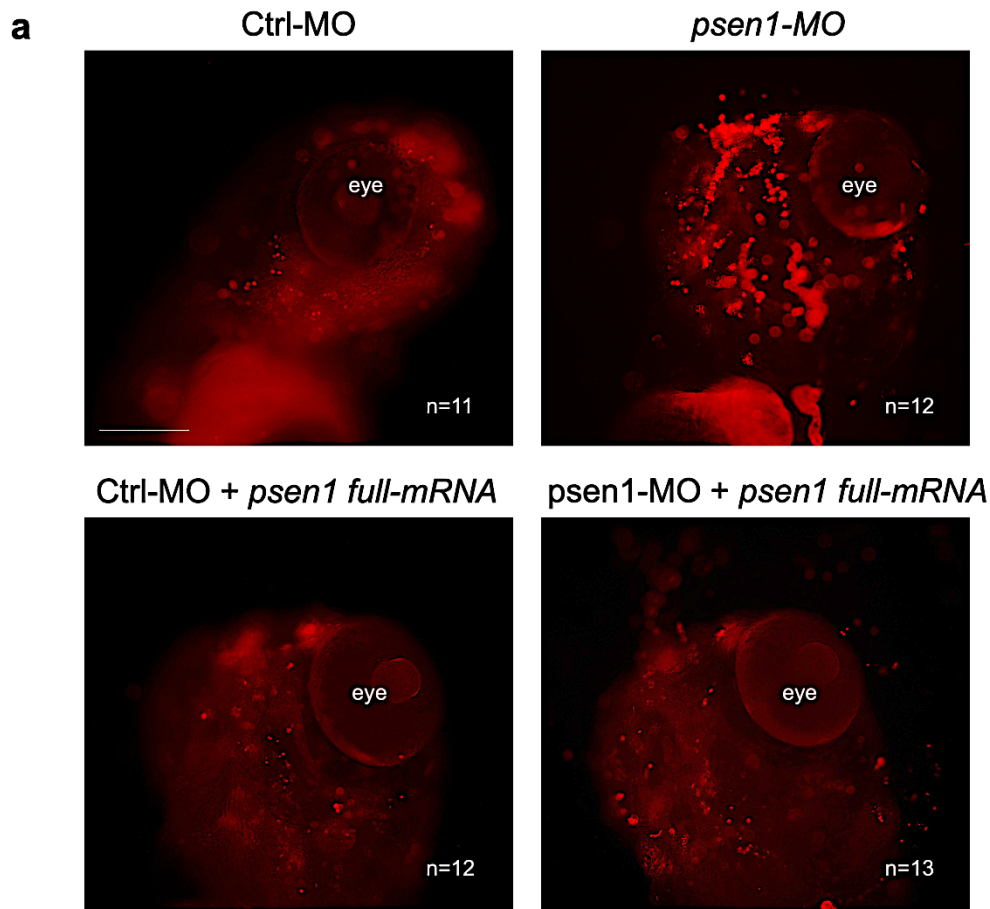
Supplementary figure 1. a) brightfield images of zebrafish embryos injected with control; *psen1*-morpholino and *psen1*-mRNA at 5dpf. b) Statistical analysis of head area, one-way ANOVA with Tukey–Kramer post hoc tests, adjusted for multiple comparisons. (ns= 0.68; * $p < 0.01$). Center values denote the mean, and error values denote s.e.m.

Supplementary figure 2

a**b****c**

Supplementary figure 2. a) Quantification of $A\beta_{1-42}$ concentration in ctrl, psen1-MO and embryo co-injected with *psen1-mRNA*. Quantitative real time PCR at 5 dpf for b) *il1b* and c) *tnfa* in the head of psen1-morphants (psen1-MO) and control (ctrl-MO) coinjected with *psen1-mRNA*. Statistical analysis: one-way ANOVA with Tukey–Kramer post hoc tests, adjusted for multiple comparisons.

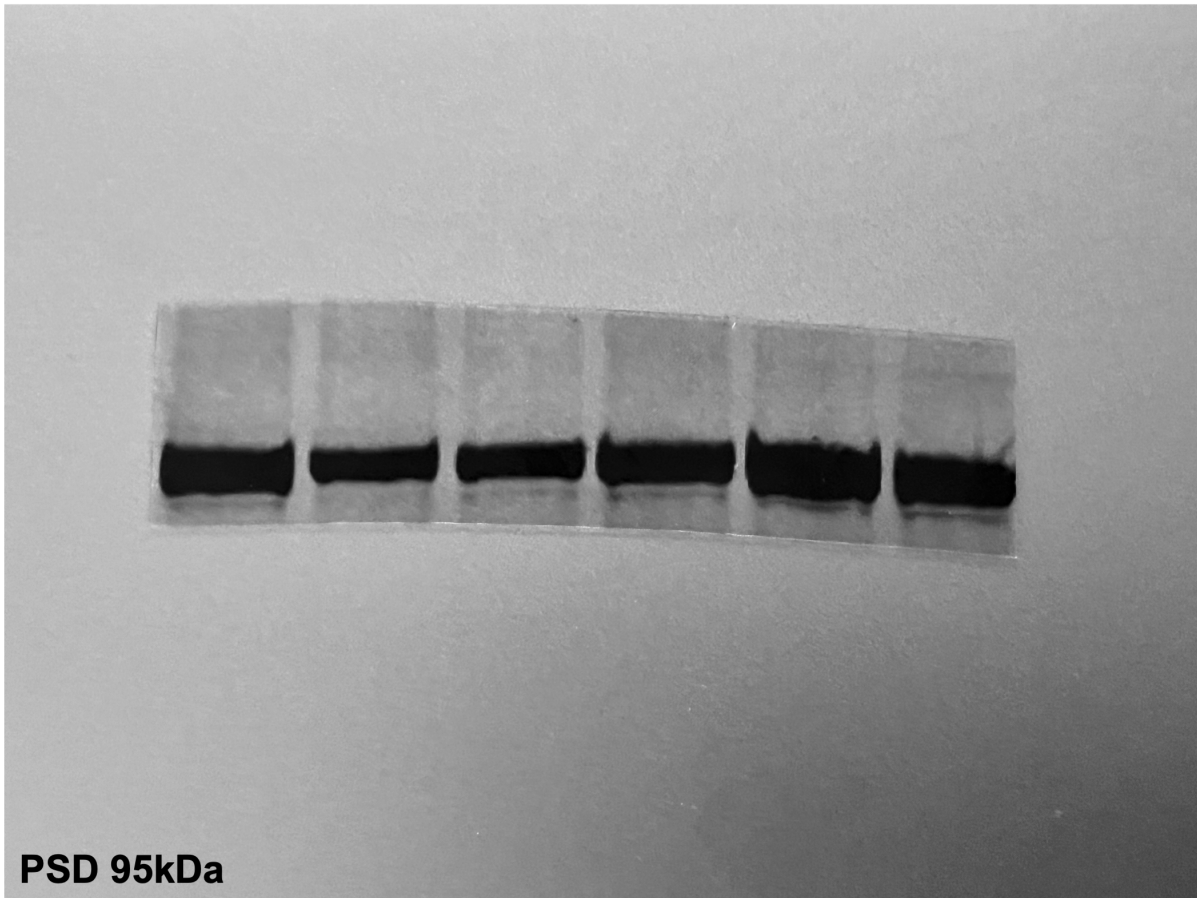
Supplementary figure 3



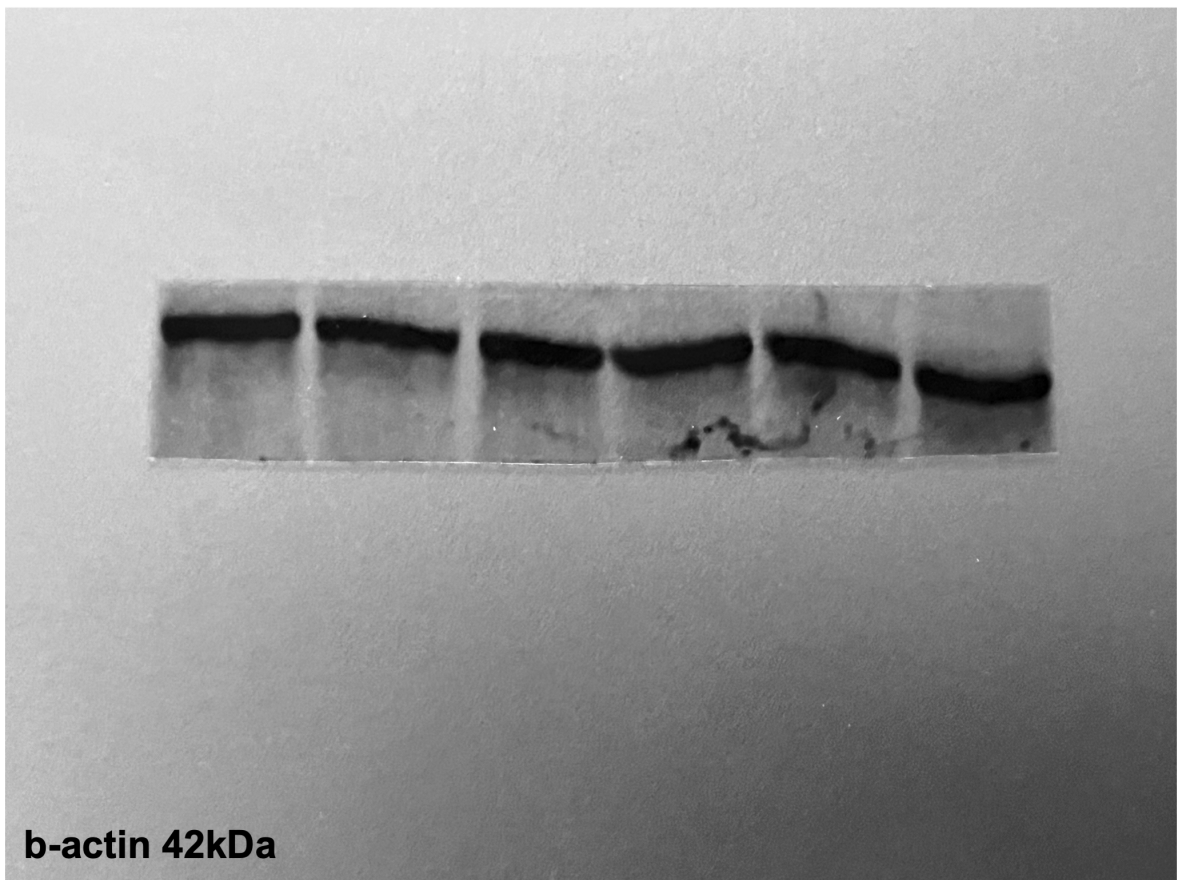
Supplementary figure 3. a) Confocal imaging to detect MitoSOX fluorescent probe (red) in the head of control and *psen1*-morphants and/or co-injected with *psen1*-mRNA. b) Quantification of MitoSOX positive cells affected by oxidative stress. The center values of all statistical analyses denote the mean, and error values denote s.e.m. Statistical analysis: one-way ANOVA with Tukey–Kramer post hoc tests, adjusted for multiple comparisons, *** $P < 0.0001$; ns=0.21 ; ns=0.33. Scale bar: 100 μ m (a).



Supplementary figure 4. Western blot original uncropped for nNOS.



Supplementary figure 5. Western blot original uncropped for PSD95



Supplementary figure 6. Western blot original uncropped for b-actin