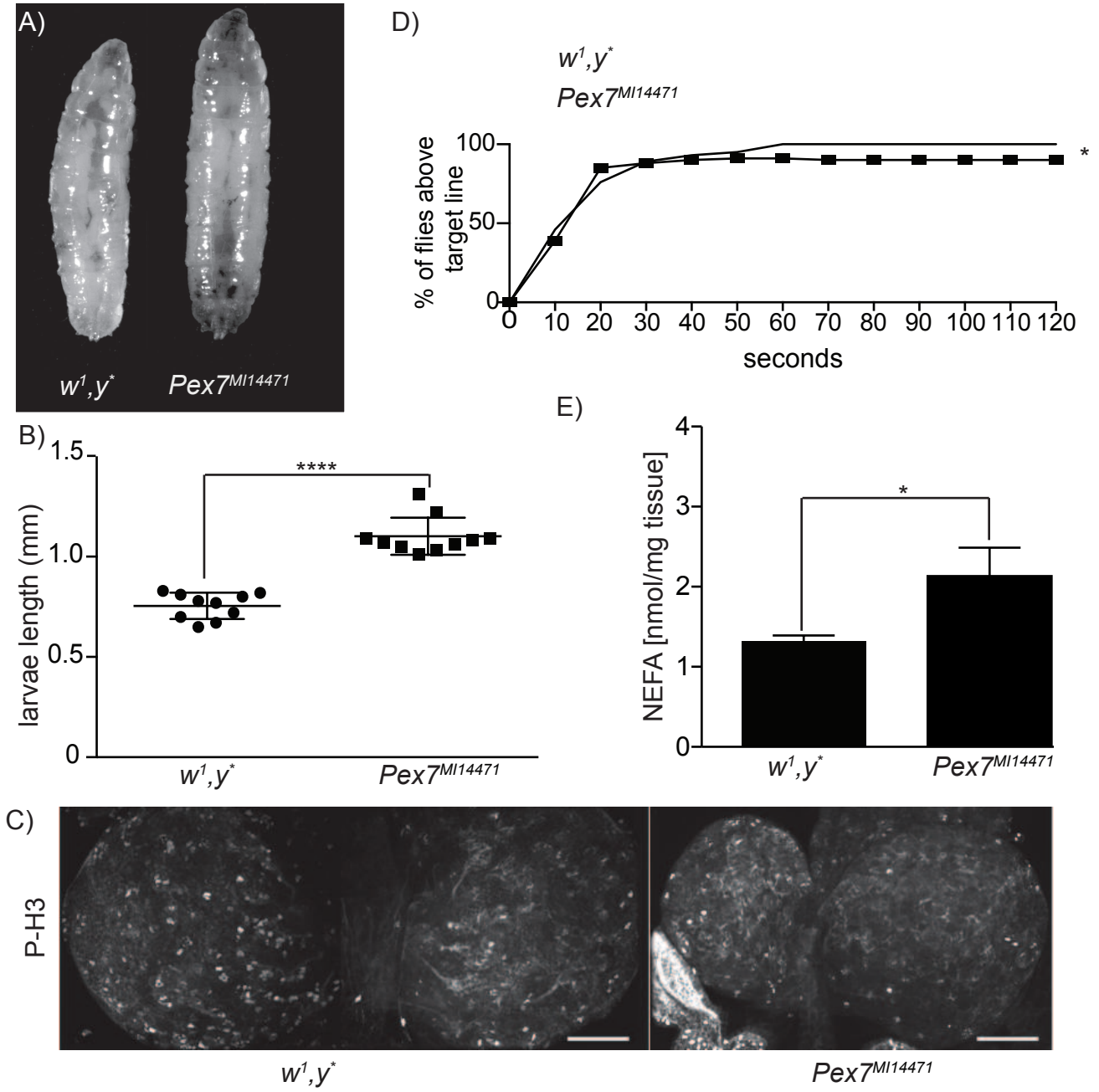

Figure S1. Pex7 mutant animals show neural defects. (A) Age matched *Pex7MI14471/Pex7MI14471* larvae are larger than control larvae at the L2-L3 molt. (B) Length of age matched *w1, y** and *Pex7MI14471/Pex7MI14471* larvae at the L2-L3 molt. N = 10 per genotype. Significance was determined using Student's t-test; ****, $p < 0.0001$. (C) Brains from *Pex7MI14471/Pex7MI14471* larvae exhibit comparable numbers of P-H3 positive mitotic cells to brains from control larvae. Scale bar, 1 µm. (D) The percentage of *Pex7MI14471/Pex7MI14471* flies passing a threshold line in the climbing assay measured at 10-sec intervals is less than the percentage of control flies passing the line. Significance was determined using Kolmogorov-Smirnov test to compare the distributions of the mutant group to those of the control group. N = 12 per time point; *, $p < 0.05$. (E) Amounts of NEFAs in control and *Pex7MI14471/Pex7MI14471* L3 larvae. Values represent the averages of 3 independent experiments ± SD. Significance was determined using Student's t-test; *, $p < 0.05$.