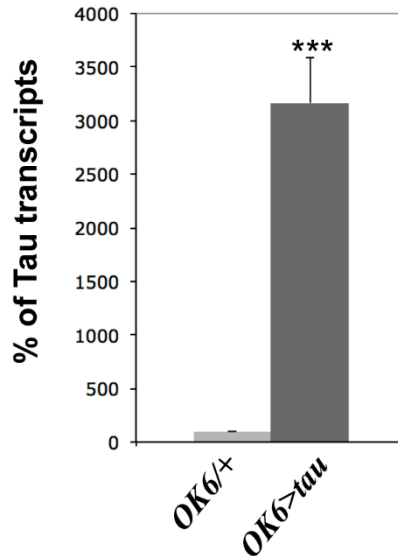


Supplementary Materials



Supplementary Figure S1. quantitative RT-PCR on Tau overexpressing larvae. Histogram showing the relative percentage of *tau* transcripts (oligonucleotides within exon 1) in tau-overexpressing larvae (*OK6-Gal4/UAS-dTau1*) compared to the endogenous level of expression of *tau* in control larvae (*OK6-Gal4/+*), set at 100%. Results are mean \pm SEM of an experiment realized in triplicate. ***: $p < 0.001$ (Student's *t*-test).

	% pausing	% outward movement	% inward movement
ctrl	24.4 \pm 1.9	41.7 \pm 3.2	33.5 \pm 2.9
ep(3)3203	35.5 \pm 3.9*	38.0 \pm 3.5 (p=0.45)	26.5 \pm 2.2 (p=0.08)
ep(3)3203/Df(3R)BSC498	32.0 \pm 3.0*	42.1 \pm 4.4 (p=0.94)	25.8 \pm 4.2 (p=0.15)
overexp Tau	47.2 \pm 5.3***	28.5 \pm 8.0 (p=0.1)	24.3 \pm 5.2 (p=0.1)

Supplementary Table S1. Percentages of time spent in anterograde movement, pausing or retrograde movement. Data are: mean \pm SEM. $n = 15$ larvae for the control genotype; $n = 11$ and 7 larvae for *tau^{ep3203}* mutants and *tau^{ep3203}/Df(3R)BSC498* mutants respectively; $n = 11$ for tau-overexpressing larvae. *: $p < 0.05$, ***: $p < 0.001$ (Student's *t*-test).