



Figure S1. We did not detect any differences in muscle size among the genotypes tested. Because stochastic variation in body size among fly larvae causes slight variations in NMJ size, it is standard to report bouton number per muscle area (Schuster *et al.*, 1996). We here present a selection of the measurements of muscle area that were used to normalize the corresponding counts of bouton number in order to note that we observed no significant differences in muscle area.

(A) Quantification of the surface area of muscle 4 in abdominal segment 3. There was no significant difference among the genotypes (one-way ANOVA: $F(5,58)=1.84$, $p=0.12$).

(B) Quantification of the surface area of muscles 6/7 in abdominal segment 3. There was no significant difference among the genotypes (one-way ANOVA: $F(5,84)=0.077$, $p=0.99$).