

**Suppression of store-operated calcium entry causes dilated
cardiomyopathy of the *Drosophila* heart**

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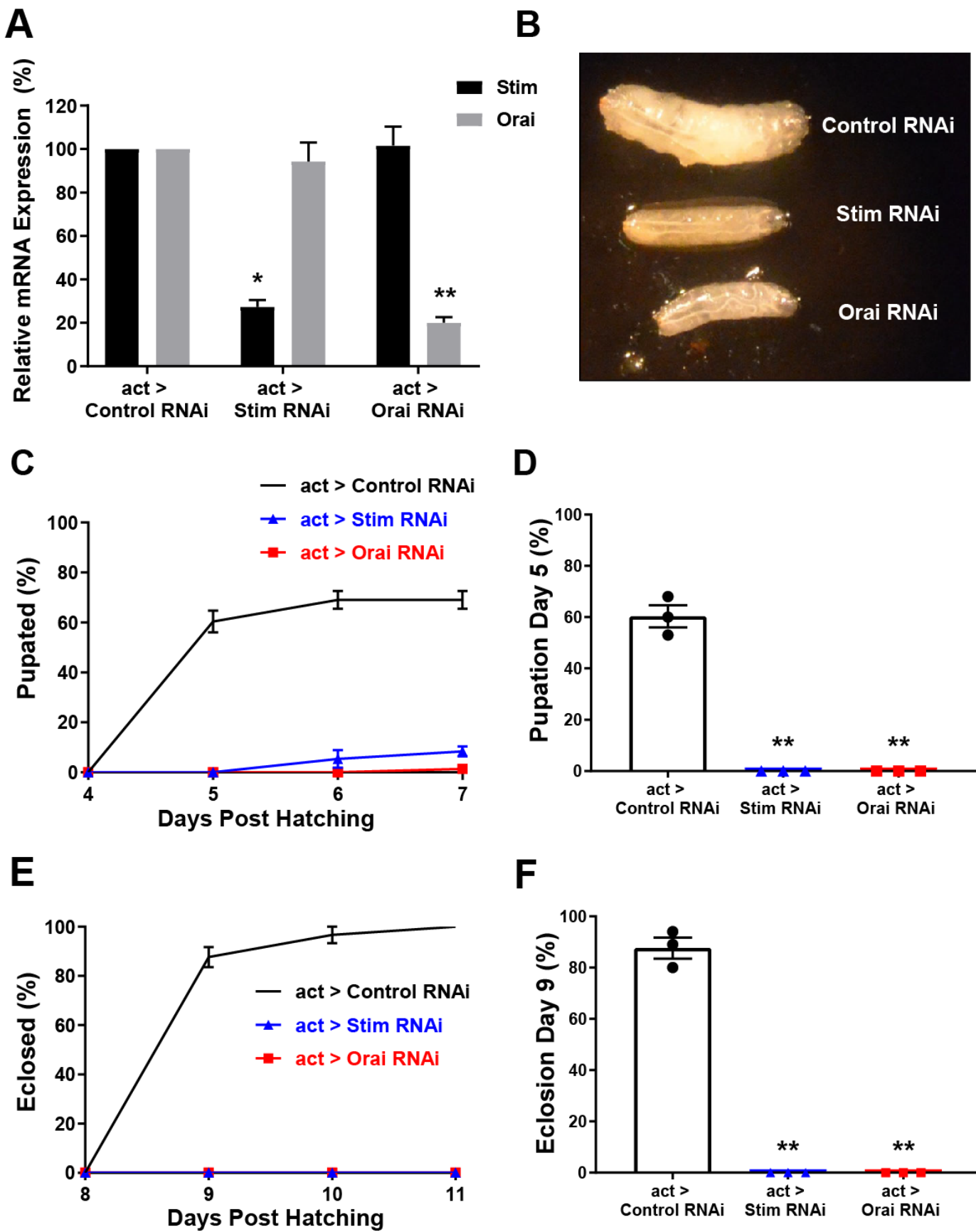
Supplementary Materials

Supplementary Figure S1. *Stim* and *Orai* RNAi are efficient and specific

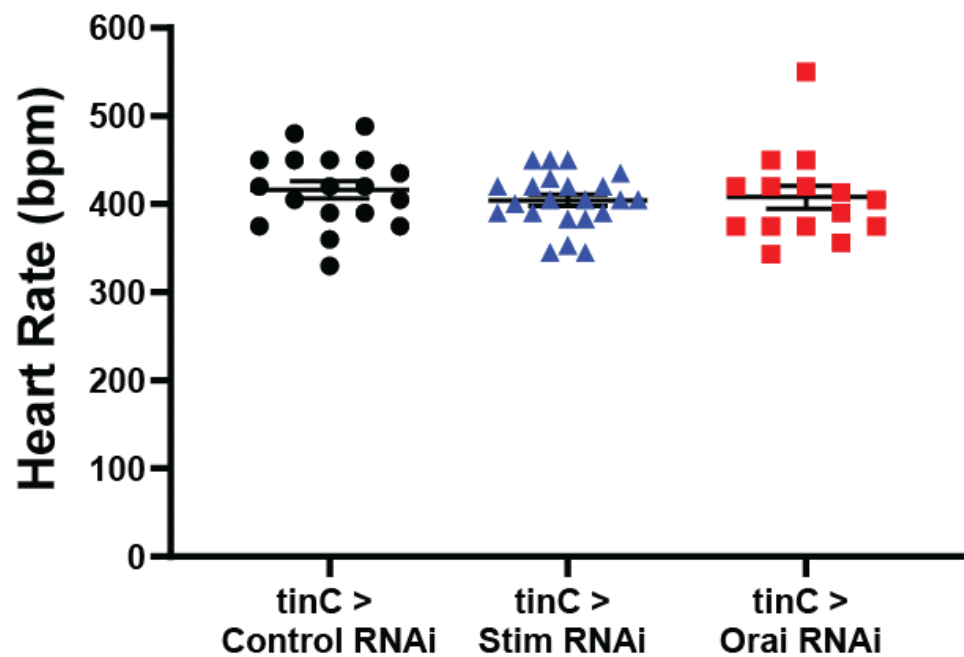
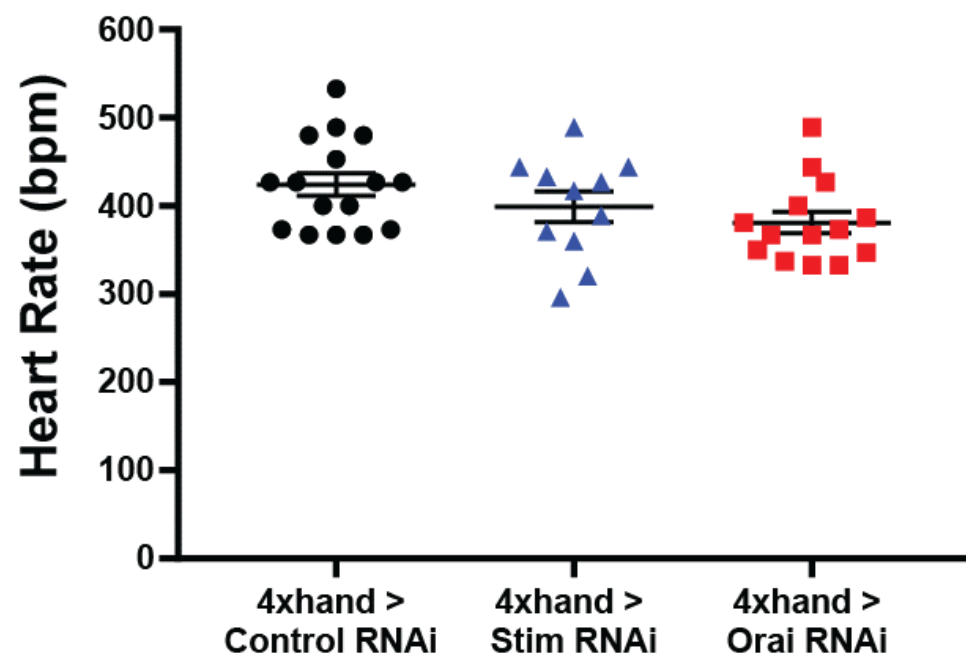
A. Relative *Stim* and *Orai* mRNA levels from first instar larvae with *act-GAL4* driven *Stim* and *Orai* RNAi compared to nontargeting control RNAi, based on RT-qPCR analysis. Data are mean \pm SEM from three independent replicates (*, $p = 0.0002$; **, $p < 0.0001$; One-way ANOVA with Tukey's Multiple Comparisons Test). **B.** Representative images of third instar larvae show significantly reduced size of *act-GAL4* driven *Stim* and *Orai* RNAi animals compared to nontargeting RNAi controls. **C.** Plot of the total number of pupae formed, expressed as a percent of the total number of larvae analyzed (25-50 per group), on each of the indicated days post-embryo hatching for *act-GAL4* driven *Stim*, *Orai*, and nontargeting control RNAi. Data are mean \pm SEM from three independent experiments. **B.** Comparison of percent pupated on day 5 post-hatching for *act-GAL4* driven *Stim*, *Orai*, and non-targeting control RNAi from three independent replicates (**, $p < 0.0001$; One-way ANOVA with Tukey's Multiple Comparisons Test). **C.** Percent eclosed determined from number pupated of *act-GAL4* driven *Stim* RNAi (blue triangles) and *Orai* RNAi (red squares) had a significant delay in eclosion compared to nontargeting RNAi (black line) controls (triplicate data shown). **D.** Comparison of percent eclosed on day 9 in *act-GAL4* driven *Stim*, *Orai* and non-targeting control RNAi (**, $p < 0.0001$; One-way ANOVA with Tukey's Multiple Comparisons Test). **E.** Plot of the total *act-GAL4* driven *Stim*, *Orai*, and nontargeting control RNAi animals that eclosed on each of the indicated days post-embryo hatching, as a percent of the total pupated animals. Data are mean \pm SEM from three independent experiments. **F.** Comparison of percent eclosed on day 9 post-hatching for *act-GAL4* driven *Stim*, *Orai* and non-targeting control RNAi (**, $p < 0.0001$; One-way ANOVA with Tukey's Multiple Comparisons Test).

Supplementary Figure S2: Heart specific suppression of *Stim* and *Orai* does not affect heart rate

Heart rate calculated as beats per min (bpm) from OCT imaging for *tinC-GAL4* (**A**) and *4xhand-GAL4* (**B**) driven *Stim* (blue triangle) and *Orai* (red square) RNAi. Results were not significantly different (One-way ANOVA with Tukey's Multiple Comparisons Test).



Supplemental Figure 1

A**B****Supplemental Figure 2**