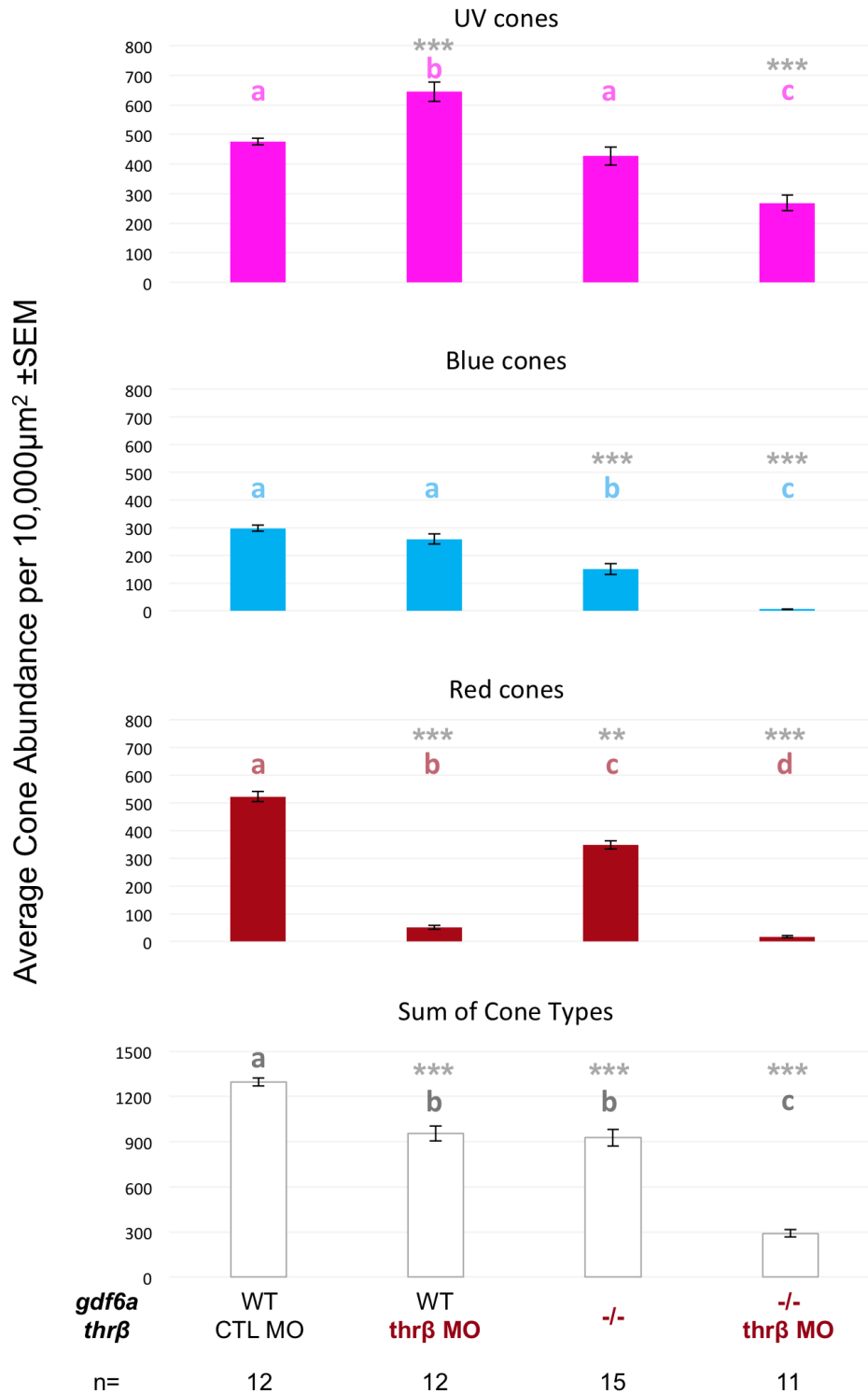


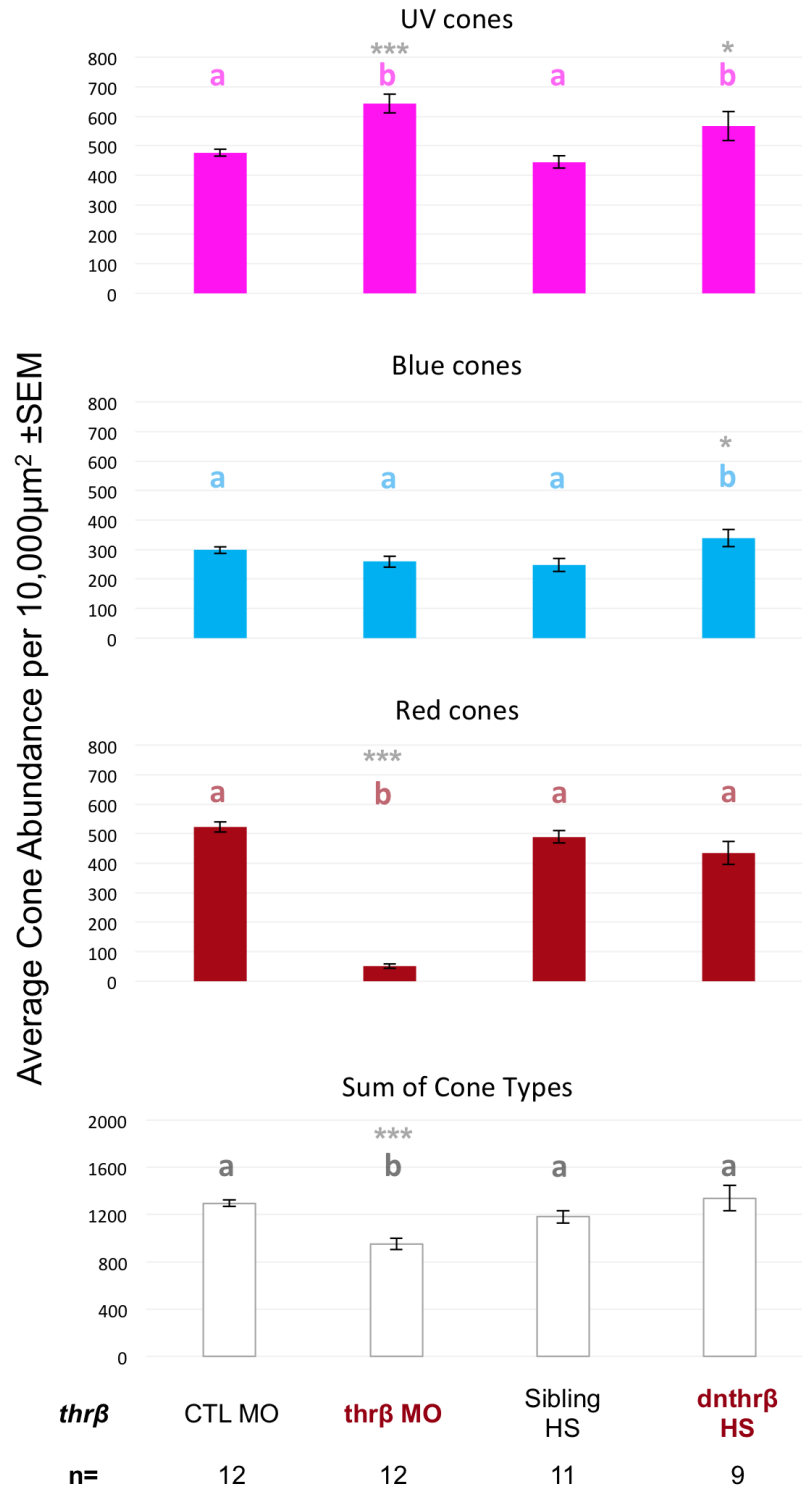
Supplemental Figure S1. Average cone abundances in embryos of *gdf6a*^{+/s327} ; *tbx2b*^{+/fby} mutant incrosses. Representation of Figure 1 data as average

abundances of UV, blue, red, and sum of the three cone types (“Sum of Cone Types”) per 10,000 μm^2 . Cones were quantified in 4dpf embryos of compound mutant crosses (Kruskall Wallis test with Mann-Whitney pairwise comparisons; values with matching letters are not significantly different; grey asterisks indicate * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ compared to WT/WT control group).



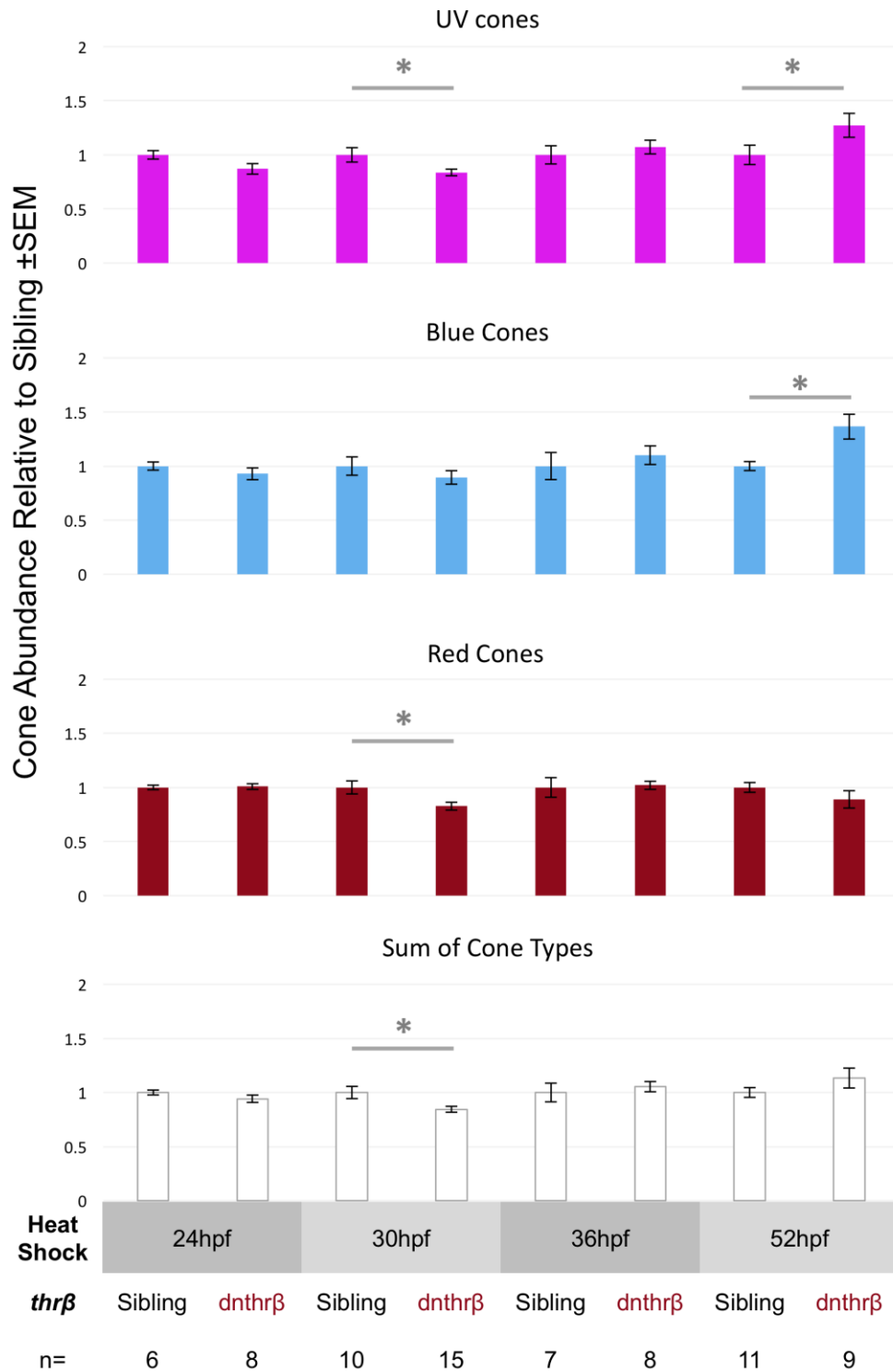
Supplemental Figure S2. Average cone abundances in MO-injected *gdf6a* mutants. Representation of Figure 2 data as average abundances UV, blue, red, and

sum of the three cone types per 10,000 μm^2 . Cones were quantified in 4dpf embryos (Kruskall Wallis test with Mann-Whitney pairwise comparisons; values with matching letters are not significantly different; grey asterisks indicate * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ compared to WT/WT control group).



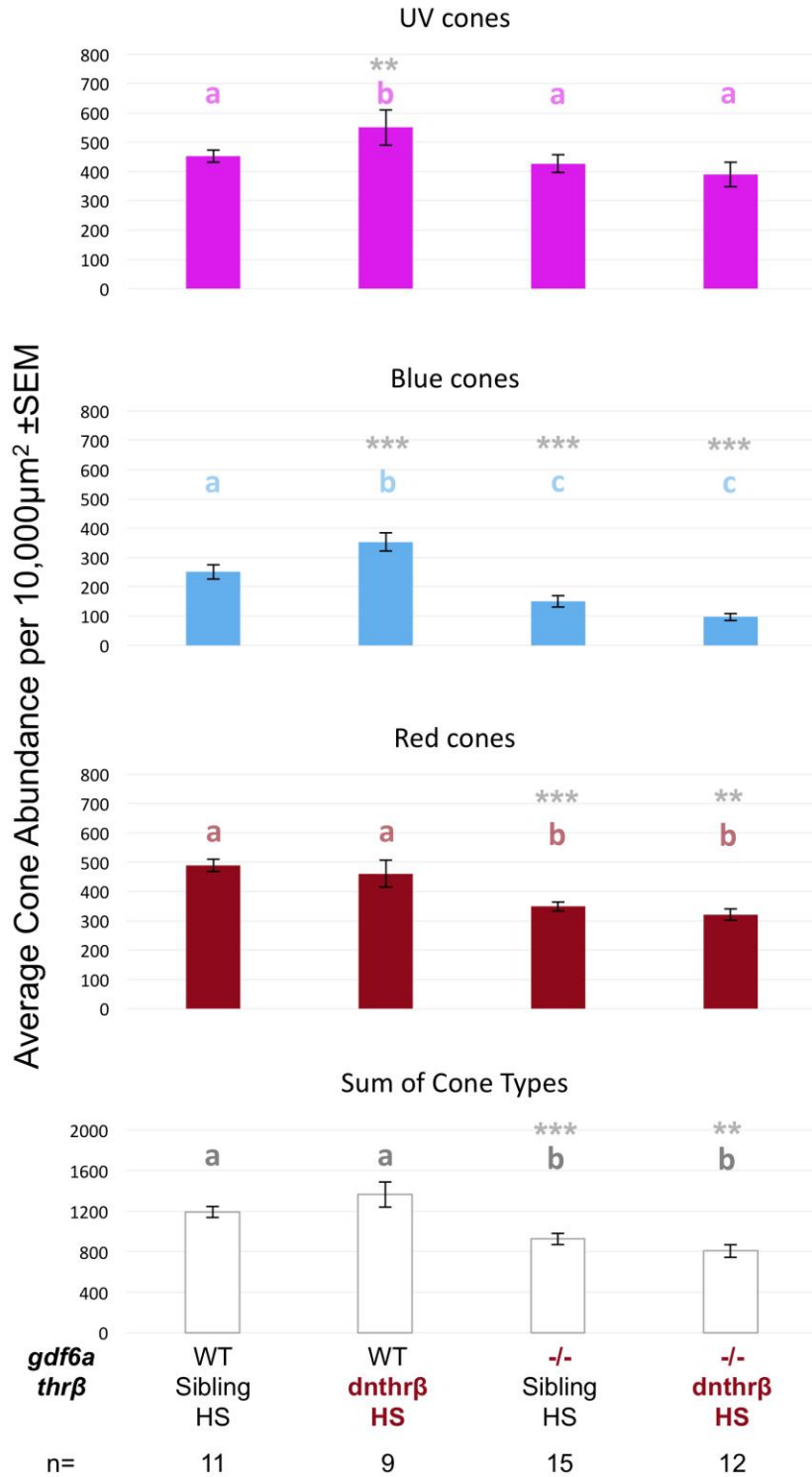
Supplemental Figure S3. Average cone abundances in MO-injected embryos and *dnthrβ* embryos. Representation of Figure 3 data shown as average

abundances of UV, blue, red, and sum of the three cone types per 10,000 μm^2 . Cones were quantified in 4dpf embryos with control (CTL) or *thr β* MO injection, and in *dnthr β* embryos (with and without heat shock [HS] shown) and siblings; statistical comparisons were performed against either CTL MO or sibling values (Mann-Whitney pairwise comparisons, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$).



Supplemental Figure S4. Normalized UV, blue, red, and total sum cone abundances following induction of *dnthrβ* at 24, 30, 36, and 52 hours post-

fertilization. Transgenic embryos (*dnthr β*) and nontransgenic siblings (Sibling) were heat shocked at the ages indicated, and cone subtype abundances were measured at 4dpf. Values for transgenics are normalized to nontransgenic siblings that were heat shocked at the same age (Mann-Whitney pairwise comparisons with exact permutation, * $p < 0.05$).



Supplemental Figure S5. Average cone abundances in *gdf6a* ; *dnthrβ* mutants.

Representation of Figure 4 data as average abundances of UV, blue, red, and sum of

the three cone types per 10,000 μm^2 . Cones were quantified in 4dpf embryos that were either wildtype or *gdf6a*^{s327/s327} and either transgenic or non-transgenic (Sibling) for *dnthr β* ; all embryos were heat shocked at 52hpf (Kruskall Wallis test with Mann-Whitney pairwise comparisons; values with matching letters are not significantly different; grey asterisks indicate *p<0.05, ** p<0.01, ***p<0.001 compared to WT sibling control group).