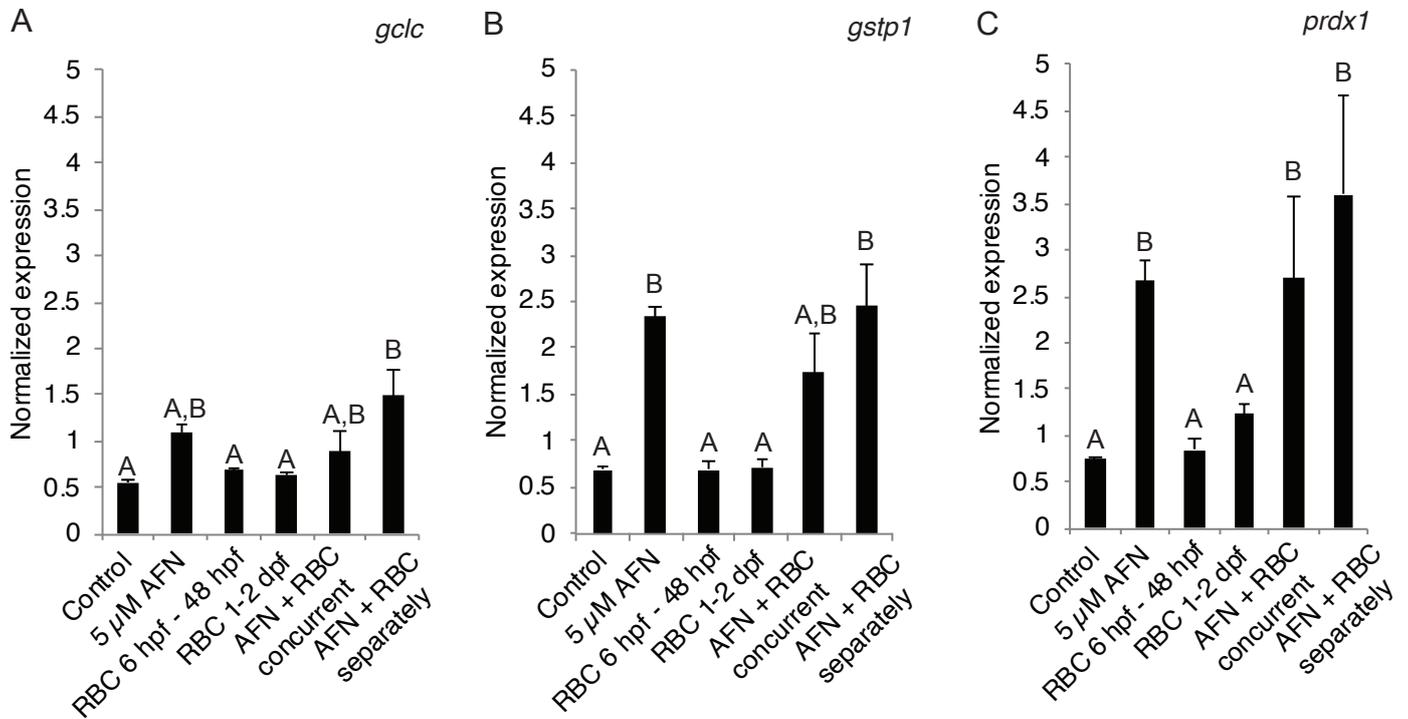


Supplementary Figure S1. Percentage of larvae with normal cranial cartilage and cranial cartilage defects in zebrafish larvae treated with increasing doses of RBC. 500 μM RBC was the highest dose before RBC became toxic. Data labels show the number of larvae observed in each treatment group. Riboceine, RBC.



Supplementary Figure S2. Normalized expression levels of *gclc*, *gstp1* and *prdx1*.

Normalized expression in 48 hpf embryos for *gclc* (A), *gstp1* (B) and *prdx1* (C) in treatments groups; untreated controls, 5  $\mu$ M AFN, RBC (500  $\mu$ M) exposure 6 hpf - 48 hpf, RBC (500  $\mu$ M) exposure 1 - 2 dpf, 5  $\mu$ M AFN and concurrent RBC (500  $\mu$ M) exposure (6 hpf - 48 hpf), 5  $\mu$ M AFN and separate RBC (500  $\mu$ M) exposure 1-2 dpf. Error bars are standard error of the mean from three biological replicates (total n = 50 embryos). Bars not sharing a letter are statistically significantly different ( $p < 0.05$ , one-way ANOVA, Tukey HSD post-hoc analysis). Auranofin, AFN. Ribocaine, RBC. hours post fertilization, hpf. days post fertilization, dpf.