

**Supplementary information, Figure S10.** Exogenous  $H_2O_2$  do not stimulate myocyte proliferation in adult hearts.  $H_2O$  or  $30 \mu M$   $H_2O_2$  was co-injected with BrdU into the thoracic cavity of sham-operated zebrafish hearts once daily for 7 days. (A-B) Double staining of control  $H_2O$ -injected (A) and  $H_2O_2$ -injected (B) hearts with anti-BrdU and Mef2C antibody. (C) Statistics of the BrdU<sup>+</sup>/Mef2C<sup>+</sup> myocytes. Note that most of the green BrdU<sup>+</sup> stainings are not cardiomyocytes. N=3.