SUPPLEMENTARY MATERIALS

Effects of H₂O₂ on cell viability

Primary neonatal rat cardiomyocytes (NRCMs; Supplementary Figure 1) and H9C2 cells (Supplementary Figure 2) were exposed to various concentrations of H_2O_2 for 4 h (left graphs) or to 40

μmol/L $\rm H_2O_2$ for different times (right graphs), and subsequently cultured for additional 48 h in normal medium. The viability of cardiomyocytes was evaluated using the CCK8 assay. We established an optimal sublethal concentration of 40 μmol/L of $\rm H_2O_2$, and a treatment duration of 4 h to induce premature senescence in cell cultures.