Impaired Cardiac Function in Cardiac-Specific SIRT1-Deficient Mice

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Description

Cardiac specific SIRT1 knockout mice were generated through the Cre/loxP system. Briefly, loxP-SIRT1 mice and Myh6-Cre mice were crossed to get SIRT1+/- mice. Then, SIRT1+/- female mice were mated with SIRT1+/- adult males to generated SIRT1-/- mice. RT-PCR revealed the gene type of SIRT1+/- and SIRT1-/- mice (A).

The low expressions of SIRT1 in SIRT1+/- and SIRT1-/- mice were confirmed by Western Blot (B). The heart/body weight was increased only in SIRT1-/- mice.

Echocardiography results (D) showed that cardiac function was impaired in SIRT1-deficient mice, with the decreased ejection fraction (EF) in SIRT1-/- mice (E).