

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 generate 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).

