

**Figure S1.  $\alpha$ -smooth muscle actin ( $\alpha$ -SMA, marker of fibroblast activation) expression in passage 0 (P0) and passage 1 (P01) left atrium (LA) and right atrium (RA) fibroblasts.**

(A) Photographs of immunofluorescent staining of  $\alpha$ -SMA stained green in P0 LA and RA fibroblasts with DAPI immunofluorescent staining (stained blue). P0 LA and RA fibroblasts expressed weak  $\alpha$ -SMA expression. (B) Photographs of the  $\alpha$ -SMA protein expression in P1 LA and RA fibroblasts. LA and RA P1 fibroblasts exhibited significant  $\alpha$ -SMA expression.

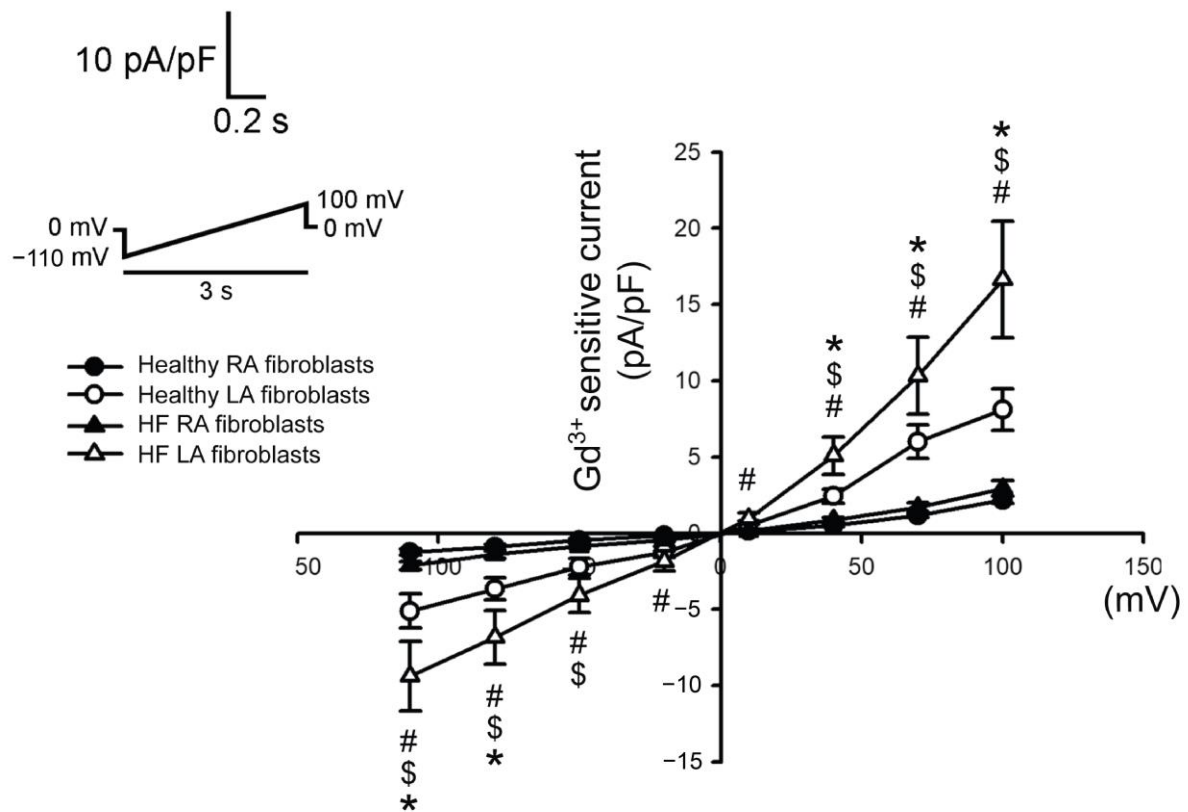
## ***Methods of Supplementary Figure S1***

### *Immunofluorescence microscopy*

Cells were fixed in PBS containing 4% paraformaldehyde for 30 min, blocked with 3% bovine serum albumin followed with anti  $\alpha$ -SMA antibody (1:200, monoclonal, clone number: 1A4, Abcam) incubation for 2 h. Cells were then incubated in goat anti-mouse IgG Alexa Fluor 488 (Invitrogen, Carlsbad, CA, USA) at a dilution of 1:200 for 1 h. Then, the cells were mounted in Vectashield (Vector Laboratories, Inc., Burlingame, CA, USA) with 4',6-diamidino-2-phenylindole for measurement by immunofluorescence microscopy.

### *Western blotting*

The procedure of the western blotting was described in the manuscript. Blots were probed with primary antibodies against  $\alpha$ -SMA (1:1000, monoclonal, clone number: 1A4, Abcam).



**Figure S2. Current/voltage (I/V) relationship of the Membrane gadolinium ( $Gd^{3+}$ )-sensitive currents in isolated passage 0 left atrium (LA) and right atrium (RA) fibroblasts from healthy and heart failure (HF) rats.** HF LA fibroblasts ( $n = 10$ ) had larger  $Gd^{3+}$  sensitive currents than healthy LA fibroblasts ( $n = 10$ ). HF RA ( $n = 10$ ) and healthy RA ( $n = 10$ ) fibroblasts had similar  $Gd^{3+}$  sensitive currents. Differences between different groups were compared by the two-way ANOVA test with a post hoc of Fisher LSD test. The insets in the current traces showed the various clamp protocols. \* Healthy LA versus healthy RA fibroblasts; \$ HF LA versus healthy LA fibroblasts; # HF LA versus HF RA fibroblasts.