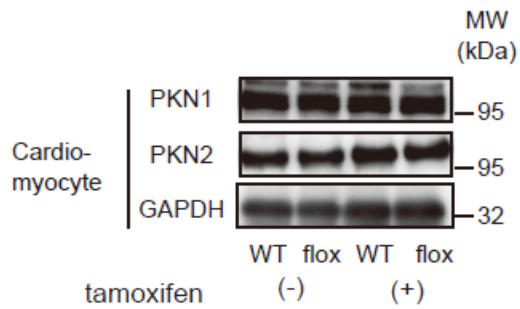


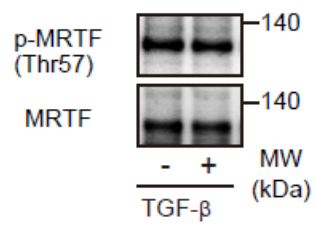
Supplemental Information

Protein kinase N promotes cardiac fibrosis in heart failure by fibroblast-to-myofibroblast conversion

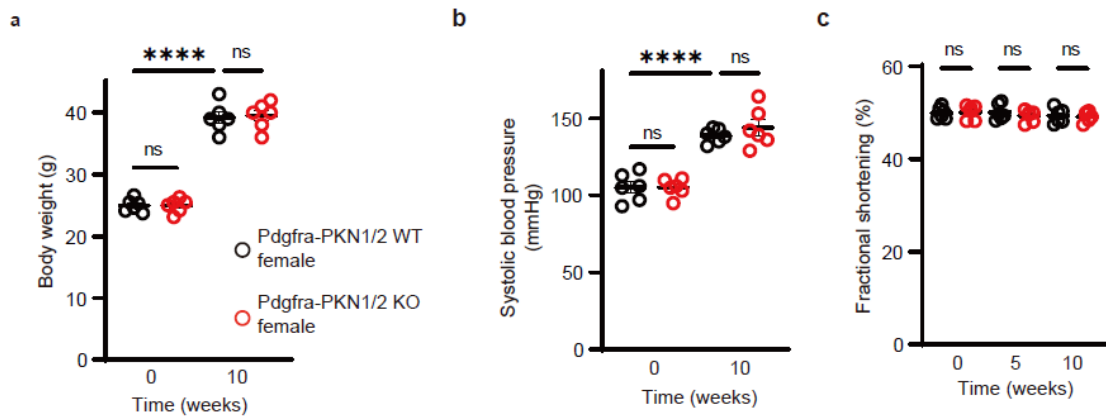
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Supplementary Figure 1. Cardiomyocytes in *Pdgfra*-protein kinase N (PKN) 1/2 knockout (KO) mice. Western blot analysis for PKN1 and PKN2 was conducted in cardiomyocytes isolated from the heart of *Pdgfra*-PKN WT or KO mice after tamoxifen induction. GAPDH was used for control. The results represent three independent experiments.



Supplementary Figure 2. MRTFA phosphorylation. Western blot analysis for MRTFA (Thr57) phosphorylation in cardiac fibroblasts. The results represent three independent experiments.



Supplementary Figure 3. Fibroblast-specific PKN1/2 WT and KO female mice exposed to the combination of HFD and L-NAME. (a) Body weight of mice from different experimental groups after 10 weeks of exposure ($n = 6$, biological replicates per group). ns, not significant; **** $p < 0.0001$. (b) Systolic blood pressure ($n = 6$, biological replicates per group). ns, not significant; **** $p < 0.0001$. (c) Fraction shortening examined using echocardiography ($n = 6$, biological replicates per group). ns, not significant. Data are presented as the mean \pm SEM and analyzed using two-way ANOVA followed by Tukey's post hoc test (a and b), or two-way repeated-measures ANOVA followed by Bonferroni post hoc test (c). The data represent three independent experiments with similar results.