

Supplemental Materials

Title: Nexilin is necessary for TATS organization in adult cardiomyocytes.

Authors: Simone Spinozzi*, Canzhao Liu*, Ze'e Chen, Wei Feng, Lungfeng Zhang, Kunfu Ouyang, Sylvia M. Evans and Ju Chen#.

*Equally contributing authors. #Corresponding author

Primers	5' -3'	Application
NX-F	5' -TCAAAGGGAAGGTCATTAATAATTC-3'	Mice genotyping
NX-R	5' -TGATGATGATGATGTTGCTAAGTG-3'	Mice genotyping
Cre-F	5' -GTTCGCAAGAACCTGATGGACA-3'	Mice genotyping
Cre-R	5' -CTAGAGCCTGTTTTGCACGTTC-3'	Mice genotyping
Nppa-F	5' -GATAGATGAAGGCAGGAAGCCGC-3'	qRT-PCR
Nppa-R	5' -AGGATTGGAGCCCAGAGTGGACTAGG-3'	qRT-PCR
Nppb-F	5' -TGTTTCTGCTTTTCCTTTATCTGTC-3'	qRT-PCR
Nppb-R	5' -CTCCGACTTTTCTCTTATCAGCTC-3'	qRT-PCR
Collagen 1a1-F	5' -TCACCAAACCTCAGAAGATGTAGGA-3'	qRT-PCR
Collagen 1a1-R	5' -GACCAGGAGGACCAGGAAG-3'	qRT-PCR
Collagen 3a1-F	5' -ACAGCAGTCCAACGTAGATGAAT-3'	qRT-PCR
Collagen 3a1-R	5' -TCACAGATTATGTCATCGCAAAG-3'	qRT-PCR
18S-F	5' -GGAAGGGCACCACCAGGAGT-3'	qRT-PCR
18S-R	5' -TGCAGCCCCGGACATCTAAG-3'	qRT-PCR

Table S1. List of primers used.

Antibody	Source, Cat. No	Antibody	Source, Cat. No
RyR2	ENZO, ALX-804-016-R100	DHPR	abcam, ab2864
JPH2	Santa Cruz, sc-51313	Casq1	Santa Cruz, sc-28274
Casq2	Santa Cruz, sc-390999	SERCA2	Santa Cruz, sc-73022
Cacna1c	ACC-003	Myomesin	DSHB, B4
GAPDH	Santa Cruz, sc-32233	a-actinin	Sigma-Aldrich, A7811

Table S2. List of antibodies used.

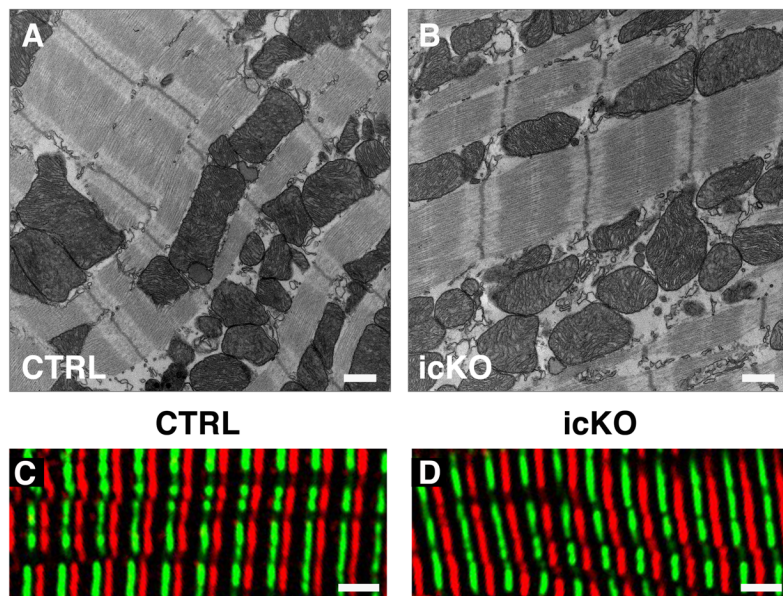


Figure S1. icKO of NEXN in adult hearts does not alter sarcomere structure.

(A, B) Electron microscopy representative images from CTRL and icKO mouse hearts, showing no alteration of the sarcomere. Scale bars 500nm (C, D) Confocal microscopy representative images from CTRL and icKO mouse hearts, staining for α -actinin in green and for myomesin in red. Scale bars 2 μ m.

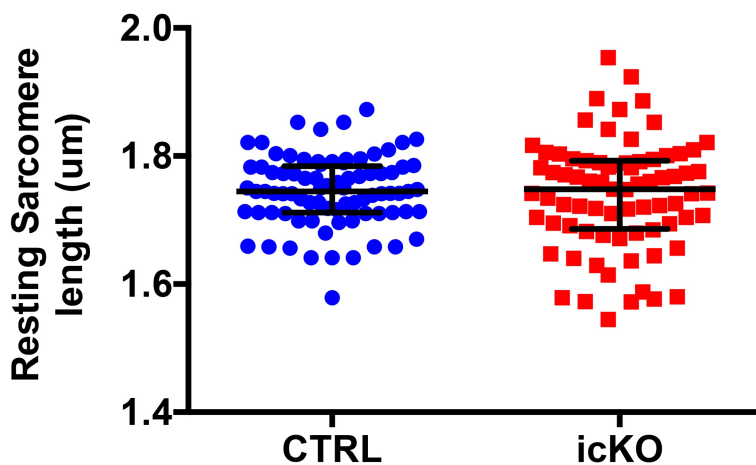


Figure S2. Sarcomere length.

Graph representing sarcomere length quantification. Results show no significant difference in resting sarcomere length between icKO and CTRL cardiomyocytes.

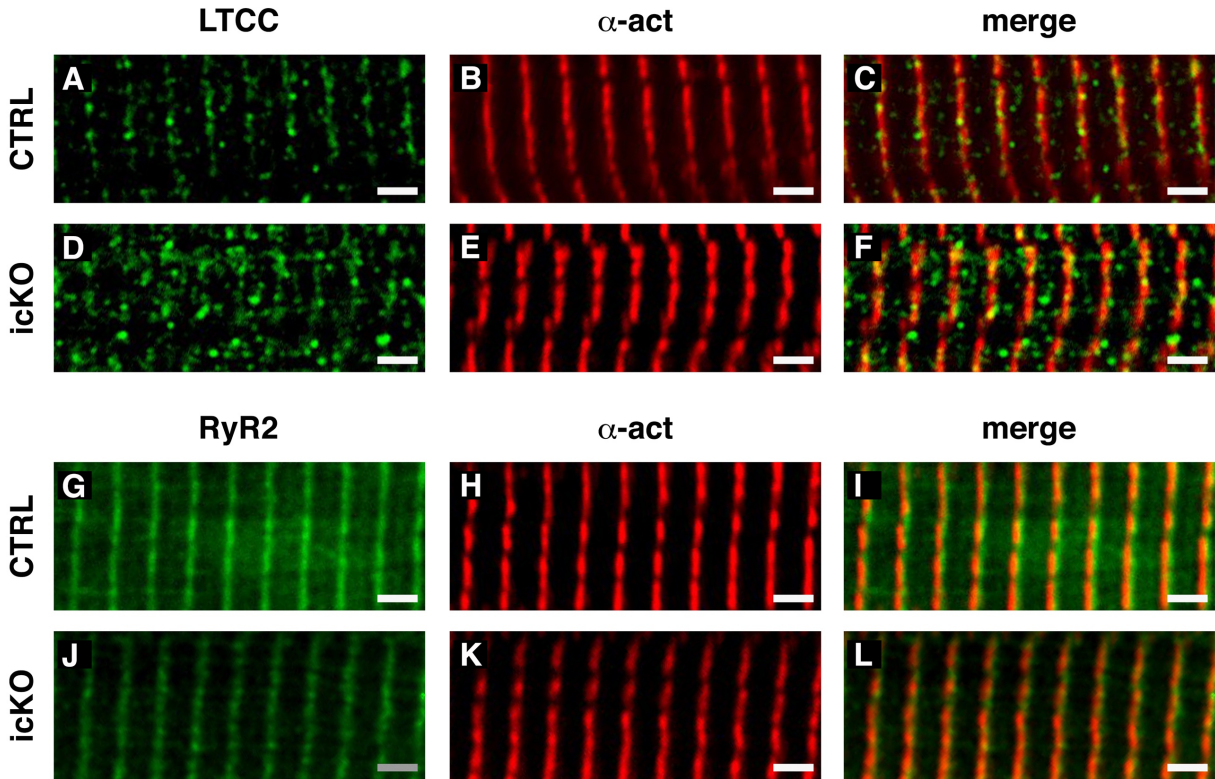


Figure S3. LTCC and RYR localization pattern.

Representative confocal images showing localization of LTCC and RYR in icKO and CTRL cardiomyocytes counterstained with α -actinin (C, F, I, L). LTCC (A, D) and RYR (G, J) in green and α -actinin (B, E, H, K) in red. Scale bars 2 μ m.