

Major Resources Table

In order to allow validation and replication of experiments, all essential research materials listed in the Methods should be included in the Major Resources Table below. Authors are encouraged to use public repositories for protocols, data, code, and other materials and provide persistent identifiers and/or links to repositories when available. Authors may add or delete rows as needed.

Animals (in vivo studies)

Species	Vendor or Source	Background Strain	Sex	Persistent ID / URL
Dog	Montreal Heart Institute from Laka Inc.	Mongrel	M/F	

Genetically Modified Animals

	Species	Vendor or Source	Background Strain	Other Information	Persistent ID / URL
Parent - Male	N/A				
Parent - Female					

Antibodies

Target antigen	Vendor or Source	Catalog #	Working concentration	Lot # (preferred but not required)	Persistent ID / URL
ASC	Santa Cruz	sc-22514-R and sc-514414	1:500		https://www.scbt.com/p/asc-antibody-n-15
α -SMA	Sigma-Aldrich	A5228	1:500		https://www.sigmaaldrich.com/catalog/product/sigma/a5228
Calmodulin	Abcam	ab45689	1:1,000		https://www.abcam.com/calmodulin-123-antibody-ep799y-c-terminal-ab45689.html
Calsequestrin2	Thermo Fisher	PA1-913	1:2,500		https://www.thermofisher.com/antibody/product/Calsequestrin-Antibody-Polyclonal/PA1-913
CaMKII δ (Total)	BD Biosciences	611293	1:1,000		https://www.bdbiosciences.com/us/reagents/research/antibodies-buffers/cell-biology-reagents/cell-biology-antibodies/purified-mouse-anti-cam-kinase-ii-45cam-kinase-ii/p/611293
CaMKII δ (Thr287)	Abcam	ab32678	1:1,000		https://www.abcam.com/camkii-phospho-t286-antibody-ab32678.html
(Pro-)Caspase-1	Santa Cruz and AMSBio	sc-56036 and 3019-100	1:250		https://www.scbt.com/p/caspase-1-antibody-14f468 https://www.amsbio.com/caspase-1-antibody-3019-100
Caspase-1 (p20)	AdipoGen	AG-20B-0042-C100	1:500		https://adipogen.com/ag-20b-0042-anti-caspase-1-p20-mouse-mab-casper-1.html/
CD68	Abcam	ab201973	1:200		https://www.abcam.com/cd68-antibody-3f7d3-ab201973.html
CD206	Abcam	ab64693	1:500		https://www.abcam.com/mannose-receptor-antibody-ab64693.html
Collagen1a1	Santa Cruz	sc-25974	1:200		https://www.scbt.com/p/col1a1-antibody-d-13

DOI [to be added]

Connexin40	Merck Millipore	AB1726	1:500		https://www.merckmillipore.com/NL/en/product/Anti-Connexin-40-Antibody,MM_NF-AB1726
Connexin43	Cell Signaling	3511	1:200		https://www.cellsignal.com/products/primary-antibodies/phospho-connexin-43-ser368-antibody/3511
F4/80	Abcam	ab16911	1:500		https://www.abcam.com/f480-antibody-bm8-ab16911.html
Fibronectin	Santa Cruz	sc-8422	1:1,000		https://www.scbt.com/p/fibronectin-antibody-ep5
GAPDH	HyTest	5G4 6C5	1:20,000		https://shop.hytest.fi/product/glyceraldehyde-3-phosphate-dehydrogenase-gapdh-antibody
Gasdermin-D	Thermo Fisher and Sigma-Aldrich	PA5-30823 and G7422	1:500		https://www.thermofisher.com/antibody/product/GSDMD-Antibody-Polyclonal/PA5-30823 https://www.sigmaaldrich.com/catalog/product/sigma/g7422
(Pro-)IL-1 β	Abcam	ab9722	1:250		https://www.abcam.com/il-1-beta-antibody-ab9722.html
MMP9	Abcam	ab38898	1:200		https://www.abcam.com/mmp9-antibody-ab38898.html
cMyBP-C	Abcam	ab133499	1:1,000		https://www.abcam.com/mybpc3-antibody-epr30092-ab133499.html
NCX1	Swant	R3F1	1:1,000		https://www.swant.com/pdfs/Monoclonal_anti_Na-Ca-exchanger.pdf
NF κ B (Total)	Novus Biologicals	NB100-56712	1:500		https://www.novusbio.com/products/rela-nfkb-p65-antibody-112a1021_nb100-56712
NF κ B (Ser536)	Novus Biologicals	NB100-82088	1:500		https://www.novusbio.com/products/rela-nfkb-p65-antibody_nb100-82088
NLRP3	Novus Biologicals	NBP1-77080	1:500		https://www.novusbio.com/products/nlrp3-nalp3-antibody_nbp1-77080
NLRP3 blocking peptide	Novus Biologicals	NBP1-77080PEP			https://www.novusbio.com/products/nlrp3-nalp3-protein_nbp1-77080pep
P2X7R	Santa Cruz	sc-15200	1:250		https://www.scbt.com/p/p2x7-antibody-l-20
PLB (Total)	Abcam	ab2865	1:2,000		https://www.abcam.com/phospholamban-antibody-2d12-ab2865.html
PLB (Ser16)	Abcam	ab92697	1:1,000		https://www.abcam.com/phospholamban-phospho-s16-antibody-epr1911-ab92697.html
PLB (Thr17)	Badrilla	A010-13	1:2,500		https://badrilla.com/phospholamban-pln-plb-pthr17-pab-serum.html
RyR2 (Total)	Thermo Fisher	MA3-916	1:1,000		https://www.thermofisher.com/antibody/product/Ryanodine-Receptor-Antibody-clone-C3-33-Monoclonal/MA3-916
RyR2 (Ser2808)	Prof. X.H.T. Wehrens	Custom	1:1,000		https://www.bcm.edu/research/labs-and-centers/faculty-labs/xander-wehrens-lab
RyR2 (Ser2814)	Prof. X.H.T. Wehrens	Custom	1:2,000		https://www.bcm.edu/research/labs-and-centers/faculty-labs/xander-wehrens-lab

SERCA2a	Santa Cruz	sc-8095	1:2,000	https://www.scbt.com/p/serca2-antibody-n-19
TGF- β 1	Abcam	ab9758	1:200	https://www.abcam.com/tgf-beta-1-antibody-ab9758.html
TLR4	Novus Biologicals	NB100-56566	1:250	https://www.novusbio.com/products/tlr4-antibody-76b3571_nb100-56566
Troponin-C	Fitzgerald	10R-T122a	1:500	https://www.fitzgerald-fii.com/troponin-c-antibody-cardiac-10r-t122a.html
Troponin-I	Cell Signaling	4002	1:500	https://www.cellsignal.com/products/primary-antibodies/troponin-i-antibody/4002
Vimentin	Santa Cruz	sc-373717	1:1,000	https://www.scbt.com/p/vimentin-antibody-e-5

DNA/cDNA Clones

Clone Name	Sequence	Source / Repository	Persistent ID / URL
GSDMD shRNA	<i>CCTAAGGCTGCAGGTAGAATC</i>	Vector Biolabs	https://www.vectorbiolabs.com/product/shadv-260827-mouse-gsdmd-shrna-silencing-adenovirus/?azsid=bed6d1d1-3ded-4e26-afa8-5f0140f240e8&i=1

Cultured Cells

Name	Vendor or Source	Sex (F, M, or unknown)	Persistent ID / URL
HL-1 cells	Merck Millipore (SCC065)	Unknown	https://www.merckmillipore.com/NL/en/product/HL-1-Cardiac-Muscle-Cell-Line,MM_NF-SCC065

Data & Code Availability

Description	Source / Repository	Persistent ID / URL
C++ code for human atrial cardiomyocyte model	GitHub	https://github.com/jordiheijman
Full Western blots	Online Supplement	

Other

Description	Source / Repository	Persistent ID / URL
Human right-atrial samples	University Medical Center Essen, Germany	#12-5268-BO
Human right-atrial samples	University Medical Center Hamburg-Eppendorf	WF-088/18
Human right-atrial samples	Dresden University of Technology	EK114082002