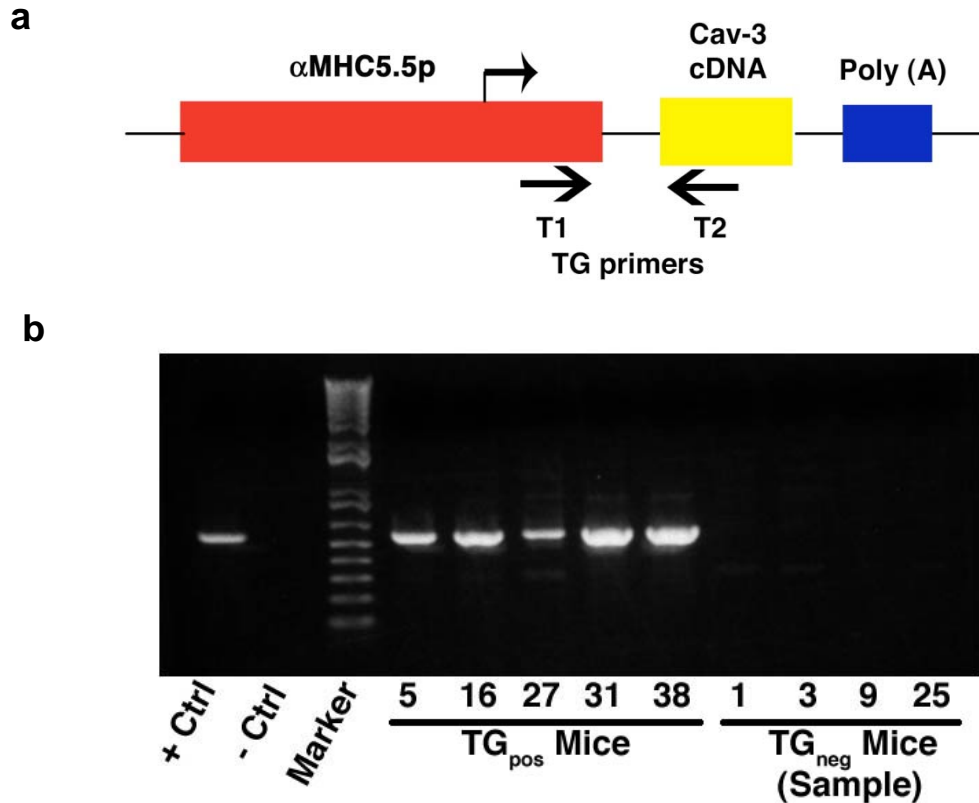
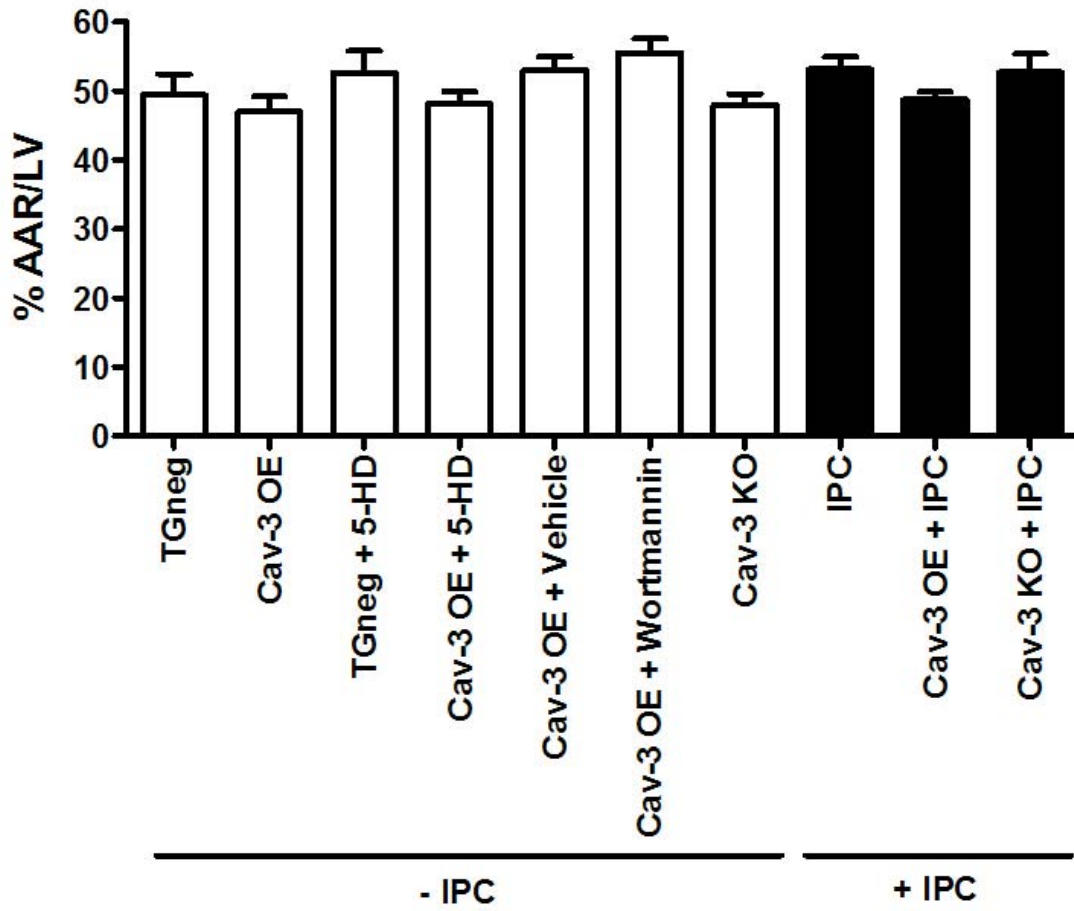


Supplementary Figure 1



Supplementary Figure 1 Generation of a cardiac myocyte specific caveolin-3 (Cav-3) transgenic mouse. **(a)** Schematic of Cav-3 construct. Full-length cDNA for mouse Cav-3 (~489bp) was cloned into a vector containing the α -myosin heavy chain promoter (α MHC) to facilitate cardiac myocyte-specific expression of Cav-3. **(b)** PCR products using transgenic (TG) primers (from **(a)**) for positive control vector DNA, negative control, and tail snip genomic DNA of TG-positive and TG-negative (TGneg) mice were run on an agarose gel. Five mice were Cav-3 TG positive (Cav-3 OE).

Supplementary Figure 2



Supplementary Figure 2 Area at risk (AAR) as a percent of the left ventricle (LV) was no different among the groups.

Table 1. Hemodynamics

	Baseline	Pre-occlusion	Ischemia 30 min	Reperfusion 120 min
Heart rate, beats · min⁻¹				
TGneg	457 ± 7	453 ± 8	431 ± 17	430 ± 19
Cav-3 OE	440 ± 7	442 ± 9	429 ± 12	440 ± 11
TGneg + 5-HD	439 ± 13	427 ± 10	424 ± 18	416 ± 10
Cav-3 OE + 5-HD	465 ± 11	439 ± 12	425 ± 10*	413 ± 11*
Cav-3 OE + Wortmannin	435 ± 7	441 ± 9	427 ± 10	418 ± 11
Cav-3 OE + Vehicle	448 ± 12	442 ± 12	428 ± 14	426 ± 12
Cav-3 KO	438 ± 7	428 ± 12	414 ± 13	406 ± 14
IPC	452 ± 13	444 ± 15	430 ± 12	428 ± 15
Cav-3 OE + IPC	443 ± 20	428 ± 15	441 ± 23	425 ± 13
Cav-3 KO + IPC	450 ± 21	422 ± 20	412 ± 23	417 ± 13
Mean arterial pressure, mmHg				
TGneg	74 ± 2	71 ± 2	67 ± 3	59 ± 2*§
Cav-3 OE	75 ± 2	72 ± 2	67 ± 2*	69 ± 2
TGneg + 5-HD	72 ± 2	69 ± 2	61 ± 1*†	57 ± 1*§
Cav-3 OE + 5-HD	73 ± 2	71 ± 2	62 ± 2*	58 ± 2*§
Cav-3 OE + Wortmannin	75 ± 2	73 ± 2	62 ± 2*	59 ± 2*§
Cav-3 OE + Vehicle	72 ± 2	71 ± 2	69 ± 1	66 ± 2
Cav-3 KO	75 ± 2	73 ± 2	61 ± 3*†	58 ± 3*§
IPC	71 ± 1	69 ± 1	71 ± 1	66 ± 1*
Cav-3 OE + IPC	72 ± 3	70 ± 3	65 ± 2	66 ± 2
Cav-3 KO + IPC	73 ± 2	69 ± 3	63 ± 1*	56 ± 1*§†
Rate-pressure product, beats · min⁻¹ · mmHg · 10³				
TGneg	33.7 ± 1.1	32.4 ± 1.5	28.8 ± 1.9	25.3 ± 1.8*
Cav-3 OE	33.0 ± 1.0	31.7 ± 0.7	28.8 ± 0.8*	30.3 ± 0.8
TGneg + 5-HD	31.8 ± 1.5	29.4 ± 1.1	26.0 ± 1.2*	23.9 ± 0.9*§
Cav-3 OE + 5-HD	33.9 ± 1.3	31.3 ± 1.5	26.5 ± 1.1*	23.8 ± 1.0*§
Cav-3 OE + Wortmannin	32.4 ± 1.0	32.1 ± 1.1	26.5 ± 0.9*	24.7 ± 1.2*
Cav-3 OE + Vehicle	32.1 ± 1.0	31.3 ± 0.8	29.6 ± 1.0	28.0 ± 0.9*
Cav-3 KO	32.9 ± 0.9	31.3 ± 1.3	25.2 ± 1.0*	23.7 ± 1.4*§
IPC	32.0 ± 1.1	30.7 ± 1.3	30.4 ± 0.8	28.3 ± 1.2
Cav-3 OE + IPC	32.0 ± 2.1	30.0 ± 1.9	28.8 ± 1.7	27.9 ± 1.3
Cav-3 KO + IPC	32.7 ± 1.7	27.5 ± 1.8	25.7 ± 1.2*	23.5 ± 0.6*§

Data are mean ± SEM. n=6-11 per group. Abbreviations are: TGneg, transgenic-negative; Cav-3 OE, caveolin-3 overexpression; 5-HD, 5-hydroxydecanoate; Cav-3 KO, caveolin-3 knockout; IPC, ischemic preconditioning. * Significantly ($p < 0.05$) different from baseline (intragroup comparison). § Significantly ($p < 0.05$) different from Cav-3 OE (intergroup comparison). † Significantly ($p < 0.05$) different from IPC (intergroup comparison).

Table 2. Morphology, echocardiography and hemodynamics

	TGneg mice	Cav-3 OE mice
Heart Weight/Tibia Length (mg/mm)	6.3 ± 0.5	5.9 ± 0.4
Echocardiography		
AWd (mm)	0.79 ± 0.04	0.86 ± 0.01
LVIDd (mm)	3.62 ± 0.14	3.68 ± 0.11
PWd (mm)	0.86 ± 0.02	0.90 ± 0.01
AWs (mm)	1.24 ± 0.07	1.28 ± 0.07
LVIDs (mm)	2.17 ± 0.12	2.31 ± 0.12
PWs (mm)	1.32 ± 0.05	1.20 ± 0.05
FS (%)	39.9 ± 3.3	37.5 ± 2.3
Hemodynamics		
HR (beats/min)	431 ± 14	436 ± 16
MAP (mmHg)	72 ± 4	72 ± 2
RPP (beats · min ⁻¹ · mmHg · 10 ³)	31.2 ± 2.2	31.6 ± 1.6

Values are mean ± SEM. n = 9-10. Abbreviations are: TGneg, transgenic-negative; Cav-3 OE, caveolin-3 overexpression; AWd and AWs, anterior wall thickness in diastole and systole, respectively; LVIDd and LVIDs, left ventricular internal cavity diameter in diastole and systole, respectively; PWd and PWs, posterior wall thickness in diastole and systole, respectively; FS, fractional shortening; HR, heart rate; MAP, mean arterial pressure; RPP, rate-pressure product.