PGC-1α overexpression suppresses blood pressure elevation in DOCA-salt hypertensive mice

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ONLINE SUPPLEMENTAL MATERIALS

Supplemental Figures
Figure S1

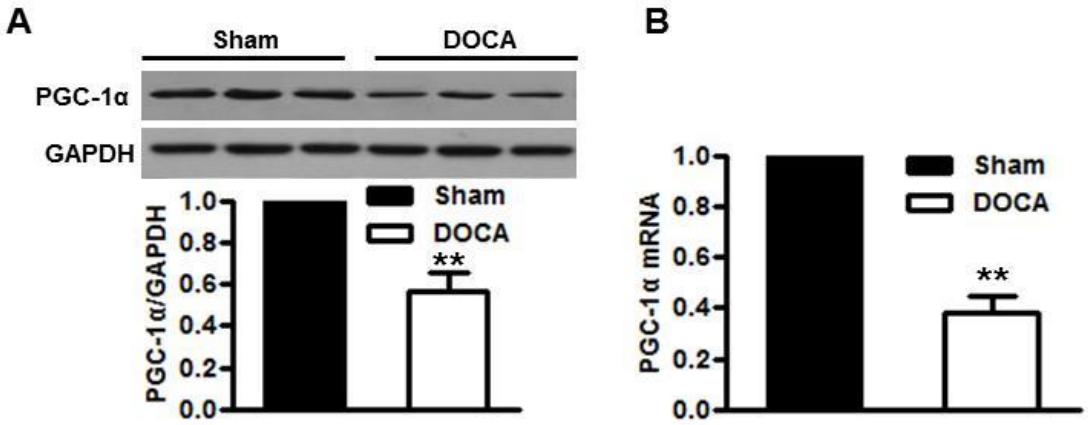

FIGURE S1 DOCA-salt treatment decreased PGC-1α expression in mesenteric resistance arteries. (A, B) western blot (A) and quantitative PCR (B) results showed that PGC-1α expression in mesenteric resistance arteries isolated from DOCA-salt mice was decreased. $^{**}P<0.01$ vs. sham group, n=6/group.

Figure S2

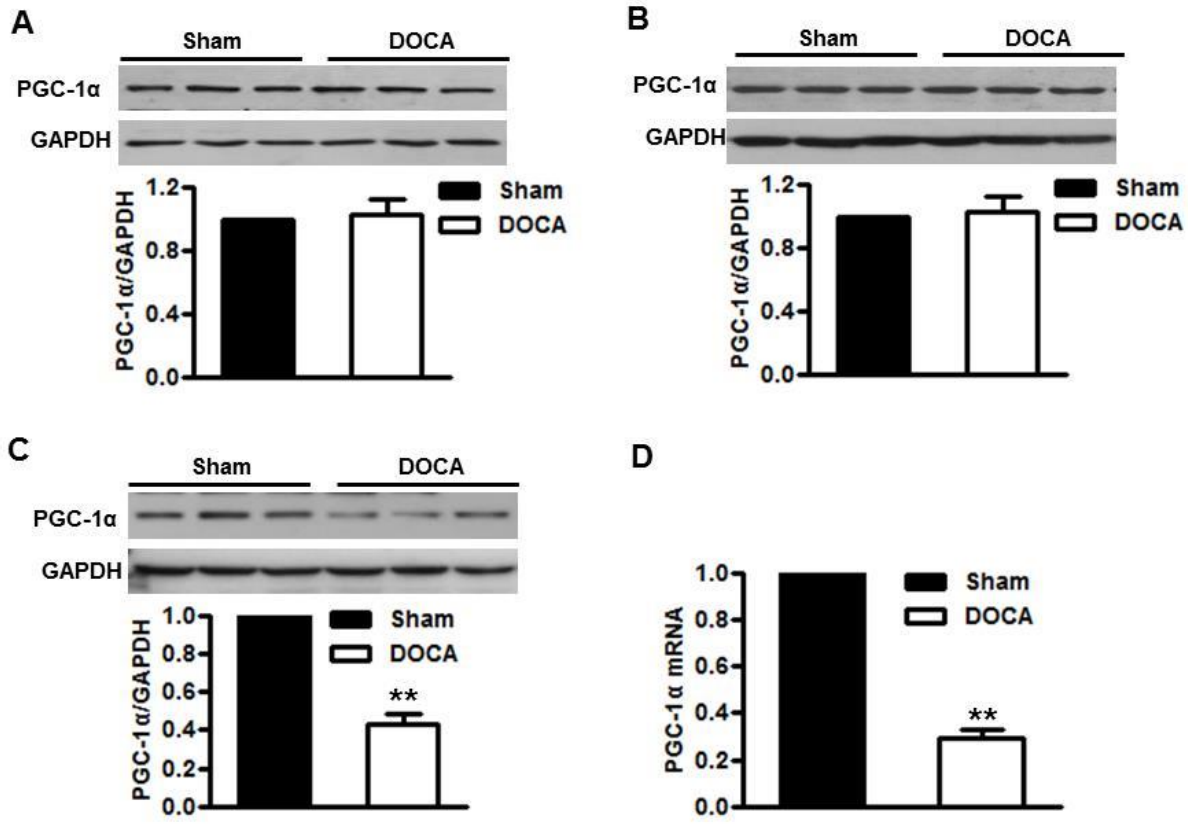

FIGURE S2 DOCA-salt treatment decreased PGC-1α expression in MAECS. (A, B) PGC-1α expression in aortas (A) and mesenteric resistance arteries (B) which both were stripped from endothelium following DOCA-salt treatment was analyzed by western blot. (C, D) western blot (C) and quantitative PCR (D) results showed that PGC-1α expression in MAECs isolated from DOCA-salt mice was decreased. $^{**}P<0.01$ vs. sham group, n=6/group.

Figure S3

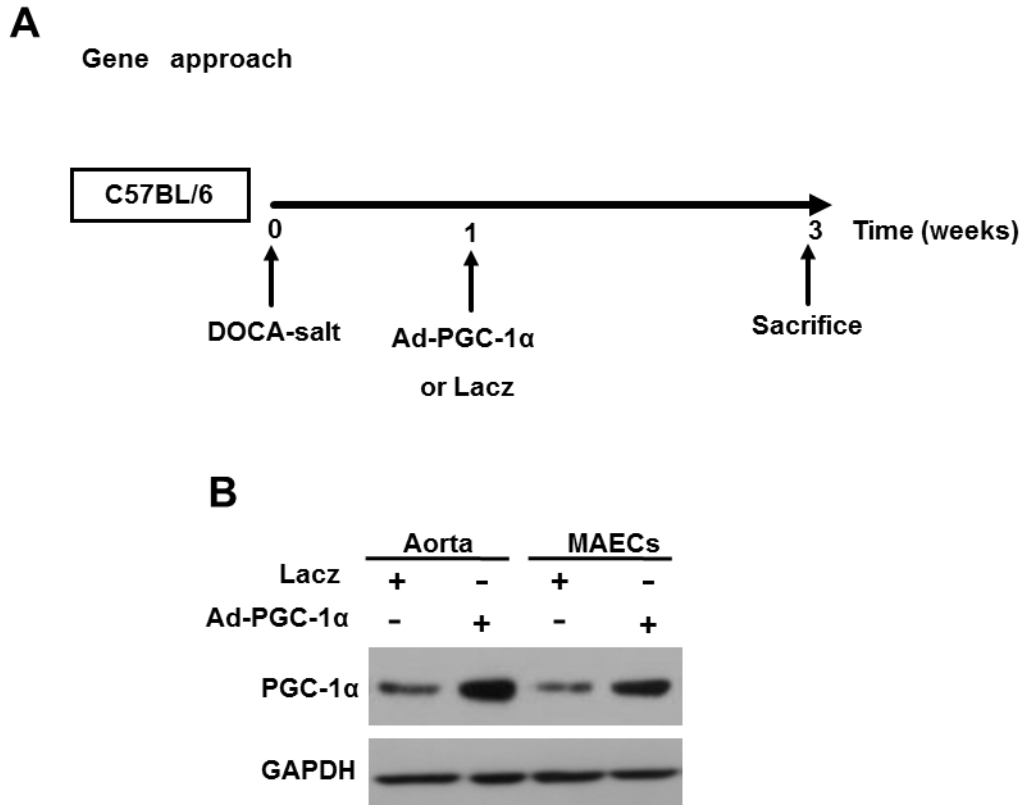

FIGURE S3 Animal experimental design. (A) A DOCA-salt hypertension model with a gene approach as schematically illustrated. (B) The infection efficiency of PGC-1α adenovirus was confirmed in aortas and MAECs by western blot. n=6/group.

Figure S4

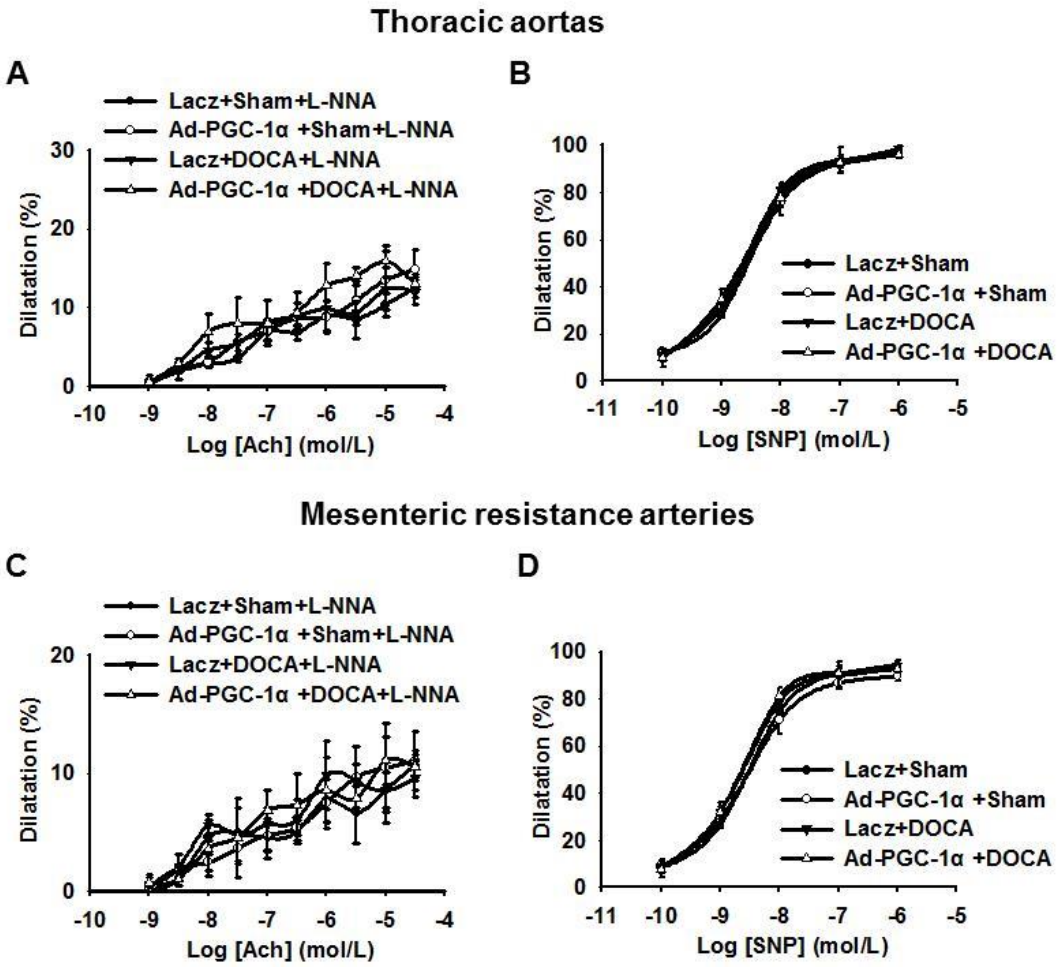

FIGURE S4 Effects of PGC-1α on thoracic aortas and mesenteric resistance arteries reactivity. (A) Endothelium-dependent eNOS-independent relaxation in thoracic aortas was evaluated by measuring the response to acetylcholine (Ach, 10^{-9}-10^{-5} mol/L) after incubation with the eNOS inhibitor N(G)-nitro-L-arginine (L-NNA, 10^{-4} mol/L). (B) Endothelium-independent relaxation to the NO donor sodium nitroprusside (SNP; 10^{-10}-10^{-6} mol/L). (C, D) Endothelium-dependent eNOS-independent relaxation (C) and endothelium-independent relaxation (D) in mesenteric resistance arteries were measured as mentioned above. n=6-8/group.

Figure S5

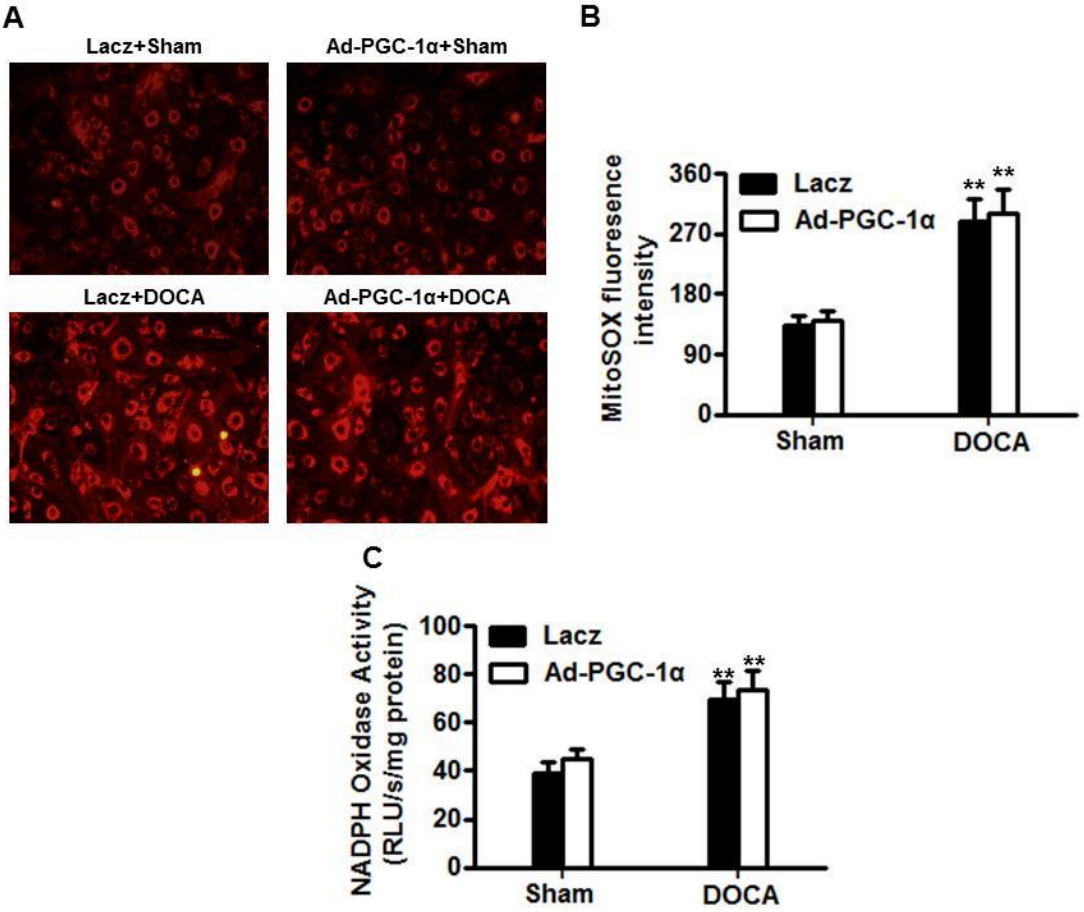

FIGURE 5 Effects of PGC-1α overexpression on mitochondrial ROS generation and NADPH oxidase activity in MAECs. (A) Confocal microscope was used to localize mitochondrial ROS generation (×200). (B) Quantitative analysis of MitoSOX fluorescence intensity. (C) Quantitation analysis of NADPH oxidase activity measured in the presence of lucigenin (5 mmol/L) followed by treating with or without NADPH (100 μmol/L). $^{**}P<0.01$ vs. Lacz+sham.

Figure S6

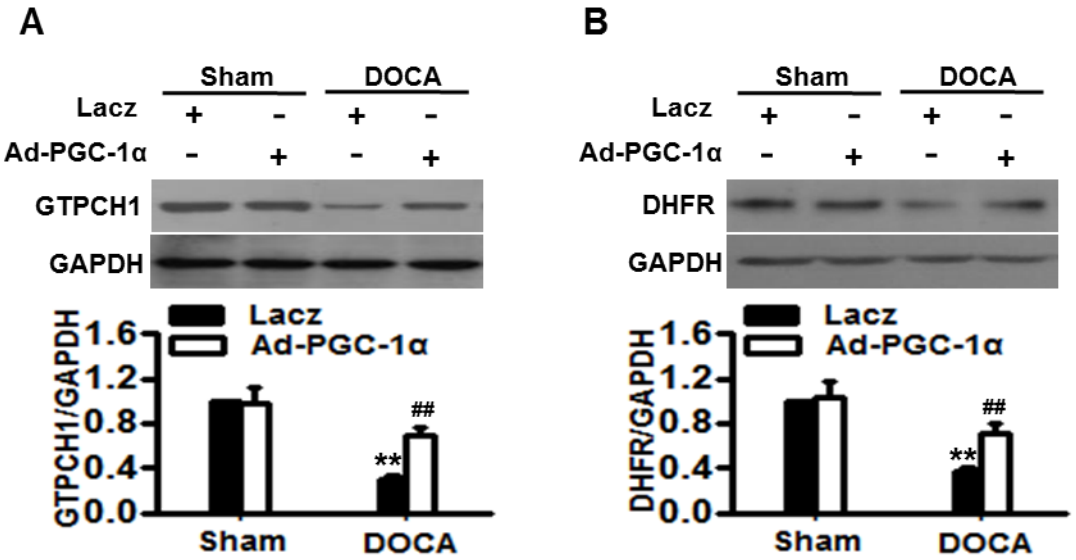

FIGURE S6 Effects of PGC-1α on the expression of GTPCH1 and DHFR in aortas. (A, B) Western blot analysis of the expression of GTPCH1 (A) and DHFR (B) in aortas isolated from Lacz-infected and Ad-PGC-1α-infected mice with or without DOCA-salt treatment. n=6/group. $^{**}P<0.01$ vs. Lacz+sham; $^{\#\#}P<0.01$ vs. Lacz+DOCA.