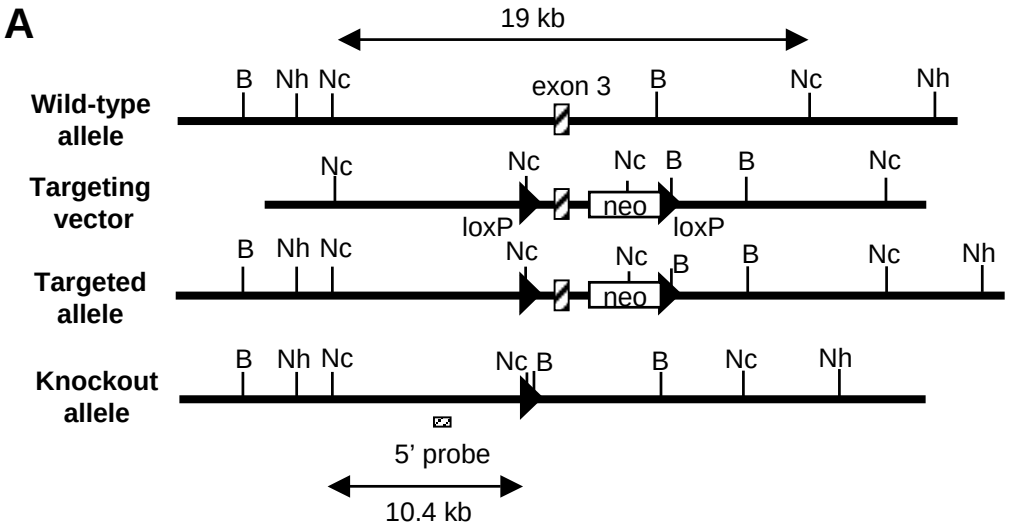
Supplementary Table

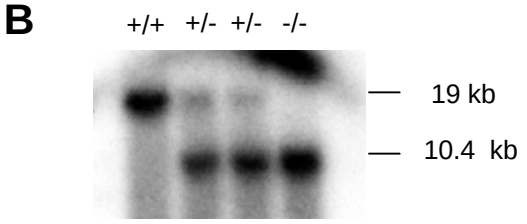
Peripheral blood counts on erythrocyte and leukocyte

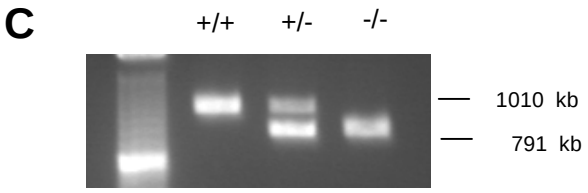
	n	RBC[A] Number (x 10^4/mm^3)	Leukocyte cell Number (x 10^2/mm^3)	Differential White Blood Cell Count (%)		
				Lymphocyte	Monocyte	Neutrophil
Non-BMT[B] mice						
WT	9	1136 ± 47.8	20 ± 0.3	86.9 ± 0.96	3.4 ± 0.38	9.2 ± 0.66
Rock1$^{+/-}$	4	1100 ± 136.6	20 ± 1.2	86.8 ± 1.11	3.5 ± 0.29	9.5 ± 1.04
Rock2$^{+/-}$	5	1011 ± 96.4	19 ± 0.73	85.2 ± 0.8	4.4 ± 0.51	9.6 ± 0.93
BMT mice						
WT to WT	4	1182 ± 74.8	21 ± 0.7	85.8 ± 1.03	4.3 ± 0.25	9.8 ± 0.85
WT to *Rock1*$^{+/-}$	4	1352 ± 130.7	20 ± 1.8	86.5 ± 1.26	3.5 ± 0.65	9.8 ± 0.85
Rock1$^{+/-}$ to WT	4	1249 ± 141.5	22 ± 0.5	87.3 ± 0.85	4.0 ± 0.00	8.8 ± 0.85

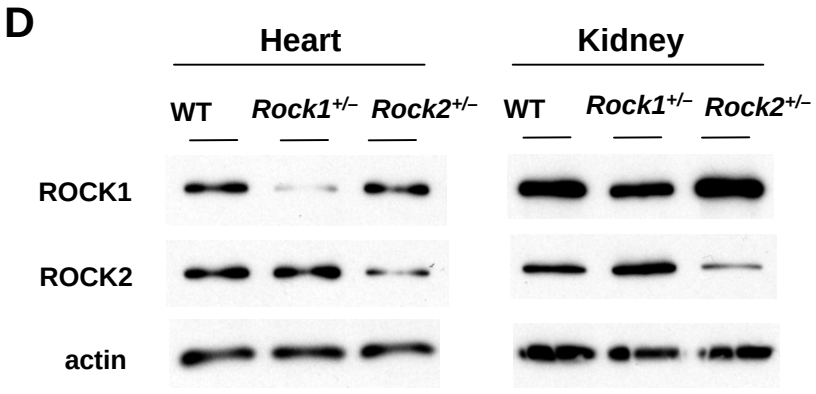
[A]RBC = red blood cell; [B]BMT = bone marrow transplantation.
All resuts are presented as mean ± SEM.

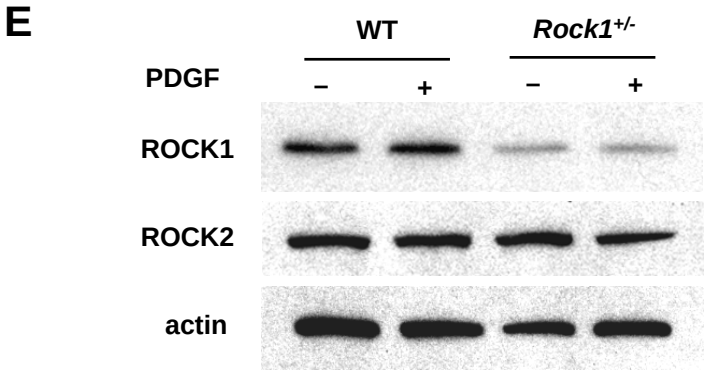
Supplementary Figure 1





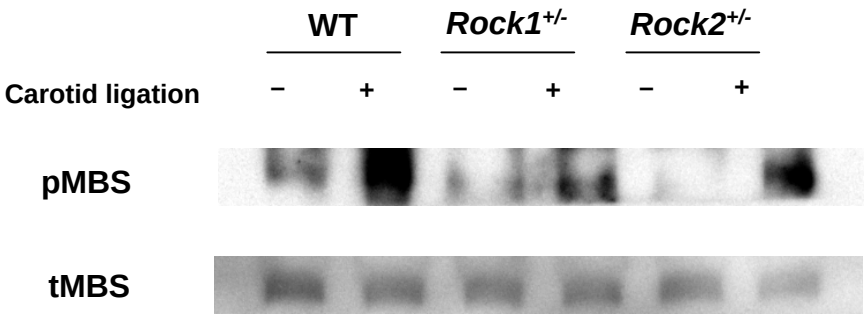






Supplementary Figure 2

A



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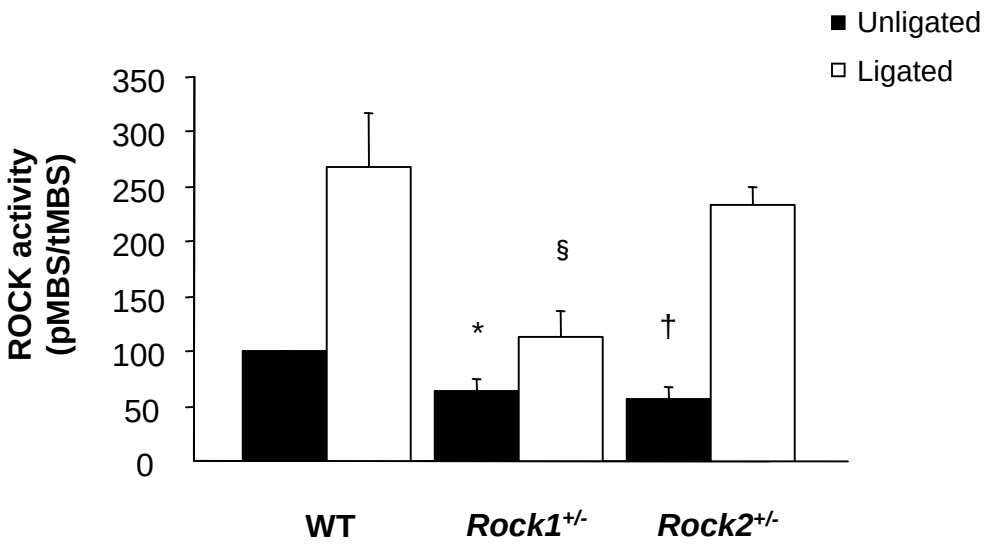

Supplementary Figure 3

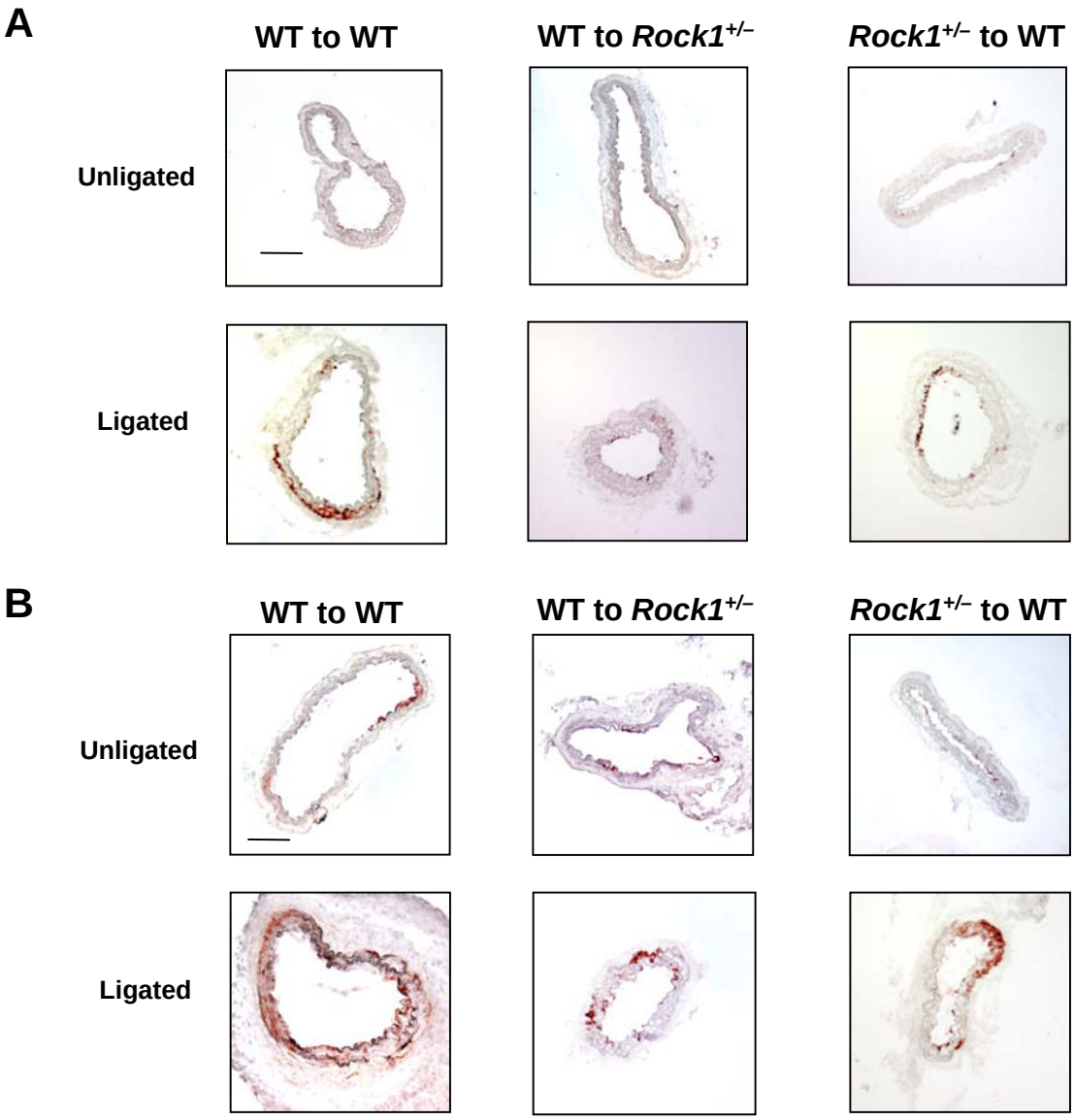

Figure 1. Generation of *Rock2*-knockout allele

(**A**) Schematic of structures of the WT allele, targeting vector, targeted allele, and *Rock2*-knockout allele. The targeting vector containing loxP sites flanking exon3 of *Rock2* was injected into embryonic stem cells. The loxP-flanked exon 3 and pGK-Neo gene in correctly targeted clones were deleted by transfection with Cre. Shown are positions of neomycin resistance (neo), loxP sites (loxP); restriction enzyme sites for BamHI (B), NheI(Nh), and NcoI (Nc); and 5' genomic probe. (**B**) Southern blots showing the presence of WT ($^{+}$) and deleted (–) *Rock2* allele. Genomic DNA was isolated from tails of WT ($^{+/+}$), *Rock2*$^{+/–}$ ($^{+/–}$), and *Rock2*$^{–/–}$ ($^{–/–}$) mice, digested with NcoI, and subjected to Southern blots. (**C**) Genotyping by PCR analysis of genomic DNA. (**D**) Western blots showing the protein levels of ROCK1 and ROCK2. Proteins were extracted from hearts and kidneys of WT, *Rock1*$^{+/–}$, and *Rock2*$^{+/–}$ mice and analyzed by Western blots using anti-ROCK1, anti-ROCK2, and anti-actin antibodies. (**E**) Representative result of Western blot analysis of ROCK1 and ROCK2 expression in VSMC of WT and *Rock1*$^{+/–}$ mice with or without PDGF stimulation for 5 minutes. Actin was used as an internal control.

Figure 2. Decreased ROCK activity in ligated carotid arteries of *Rock1*$^{+/–}$ but not *Rock2*$^{+/–}$ mice.

(**A**) Representative Western blot of ligated and unligated carotid arteries from WT, *Rock1*$^{+/–}$, and *Rock2*$^{+/–}$ mice using antibodies to phospho-MBS (pMBS) and total MBS (tMBS). (**B**) Quantification of ROCK activity as defined by the ratio of pMBS to tMBS. Mean ± SEM, n=6. *P < 0.05 versus unligated carotid arteries from WT mice; $^{\dagger}P$ < 0.01

versus unligated carotid arteries from WT mice; $^{\S}P < 0.01$ versus ligated carotid arteries from WT and *Rock2*$^{+/-}$ mice.

Figure 3. Decreased expression of endothelial adhesion molecules in WT to *Rock1*$^{+/-}$ BMT mice but not WT to WT BMT or *Rock1*$^{+/-}$ to WT BMT mice

Representative histological sections from unligated and ligated carotid arteries in WT and *Rock1*$^{+/-}$ BMT mice stained for (**A**) ICAM-1 and (**B**) VCAM-1 at 7 days after ligation. Bar represents 100 μm. (**C**) Real time PCR showing *Vla-4* mRNA expression in thioglycollate-induced macrophages from WT, *Rock1*$^{+/-}$, and *Rock2*$^{+/-}$ mice. $^{*}P < 0.01$ versus macrophages from WT mice; $^{\dagger}P < 0.05$ versus macrophages from *Rock2*$^{+/-}$ mice; $^{\S}P < 0.05$ versus macrophages from WT mice.