Online Supplement

Gene	Primers	Product Size (bp)
IL-6	F: CTGCAAGAGACTTCCATCCAG R: AGTGGTATAGACAGGTCTGTTGG	131
IL-1β	F: GAAATGCCACCTTTTGACAGTG R: TGGATGCTCTCATCAGGACAG	116
IL-33	F: ATTTCCCCGGCAAAGTTCAG R: AACGGAGTCTCATGCAGTAGA	118
MCP-1	F: TTAAAAACCTGGATCGGAACCAA R: GCATTAGCTTCAGATTTACGGGT	121
RelA	F: CCGGGATGGCTACTATGAGG R: TCTTCACACACTGGATCCCC	83
A20	F: GAACAGCGATCAGGCCAGG R: GGACAGTTGGGTGTCTCACATT	105
18s rRNA	F: AGTCCCTGCCCTTTGTACACA R: CGATCCGAGGGCCTCACTA	70

Supplementary Table I: Primers for quantitative real-time PCR.

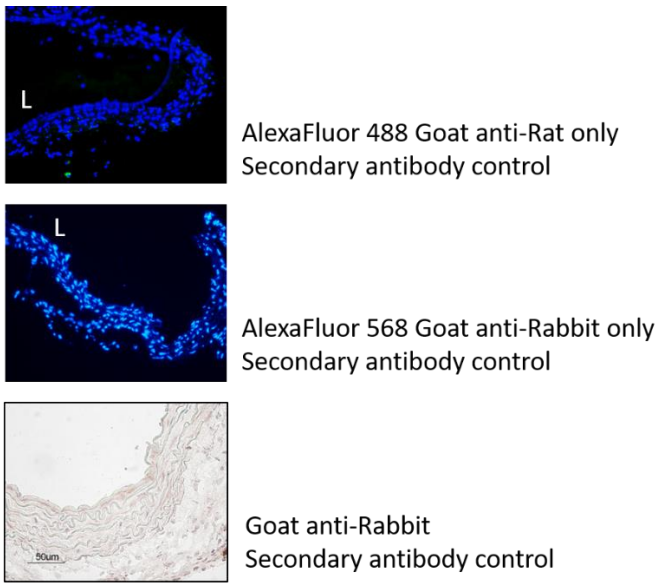

Figure SI: Immunohistochemistry controls.

Negative controls, utilizing secondary antibody only, were run with each immunofluorescence and immunohistochemistry experiment. Images were captured using a 20x objective. L indicates aortic lumen.

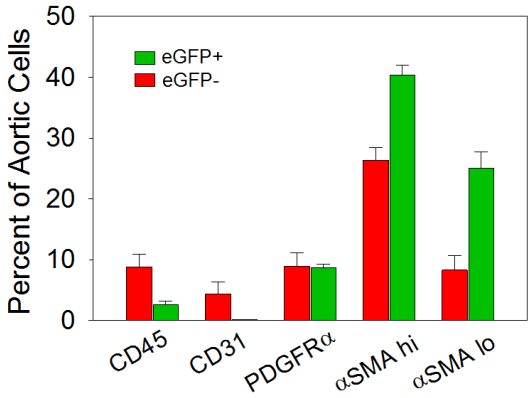

Figure SII: Quantitation of eGFP+ cells in Col1a2-CreER^T aortas.

Whole aortas from mT/mG; CreER^T- , mT/mG; CreER^T+ mice were dissociated into single-cell suspension and labeled with fluorochrome conjugated antibodies raised against CD45, CD31, PDGFRα and αSMA. Flow cytometry was used to quantify each cell type and then determine the subset which were eGFP+. N= 4 mice were analyzed in each group. Data is presented as mean ± SEM.

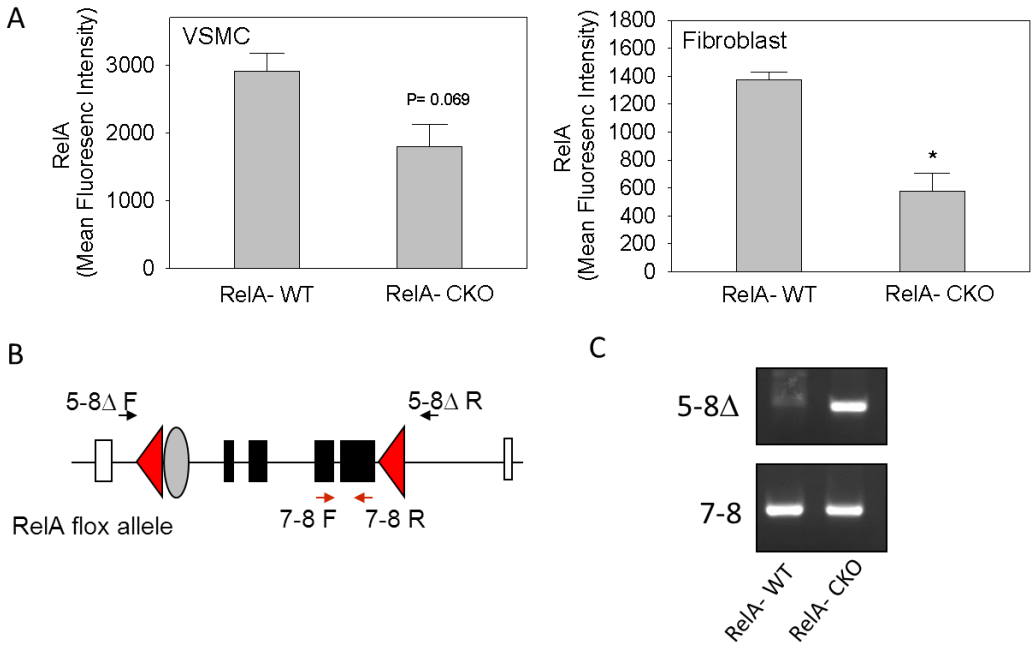

Figure SIII: Characterization of RelA conditional knockout (RelA-CKO) mice.

A) The mean fluorescence intensity of RelA was measured in aortic VSMCs and fibroblasts from RelA wild-type (RelA-WT) and RelA-CKO via flow cytometry. N= 3 in each group. Data are presented as mean ± SEM, *P< 0.05. **B)** Schematic representation of the RelA flox allele and the primer sets used for detection of the WT and KO allele. Squares represent exons and the lines in between them indicate introns. Red triangles represent the loxP sequences flanking exons 5 to 8. **C)** DNA was extracted from the tails of RelA-WT and RelA-CKO mice to detect the WT (7-8) or the KO (5-8Δ) allele via PCR. The 5-8Δ product was only present in the PCR reaction of RelA-CKO verifying that tamoxifen-induced recombination had occurred specifically in the CKO mice.

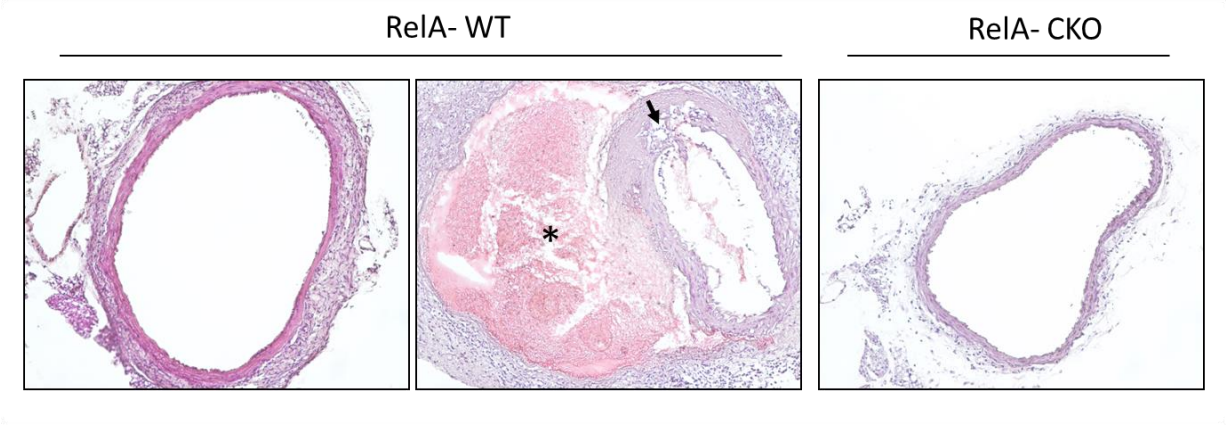

Figure SIV: Morphological changes in aortas.

Abdominal aortas from RelA wild-type (RelA-WT) and RelA conditional knockout (RelA-CKO) mice infused with Ang II were stained with H&E to determine morphological and cellular changes. Aneurysmal aorta from RelA-WT is presented in the middle panel. Arrow indicates elastin breaks in the media and the asterisk indicates an adventitial hematoma. Images were captured using a 20x objective.

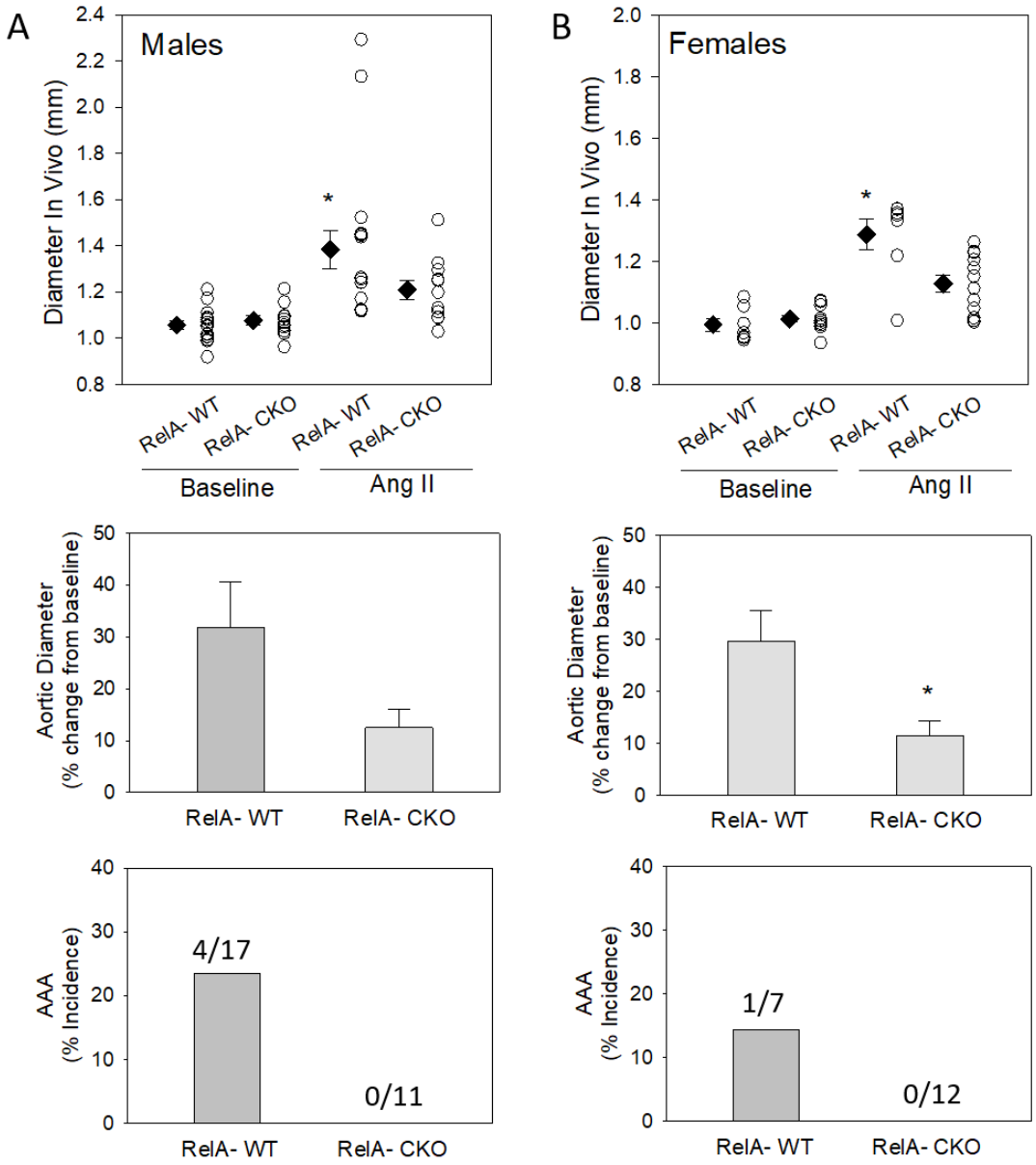

Figure SV: The role of gender in the development of AAA in RelA- WT and RelA- CKO mice.

A) Abdominal aortic diameter measurements of RelA-WT males (n=17), and RelA- CKO males (n=11) were recorded at baseline and during day 6 of Ang II infusion using ultrasonography. Data is presented in mm, percent change and percent incidence of AAA. **B)** Same measurements were made of female RelA- WT (n= 7) and RelA- CKO (n= 12) mice. Data is presented as mean ± SEM. * indicates P< 0.05.