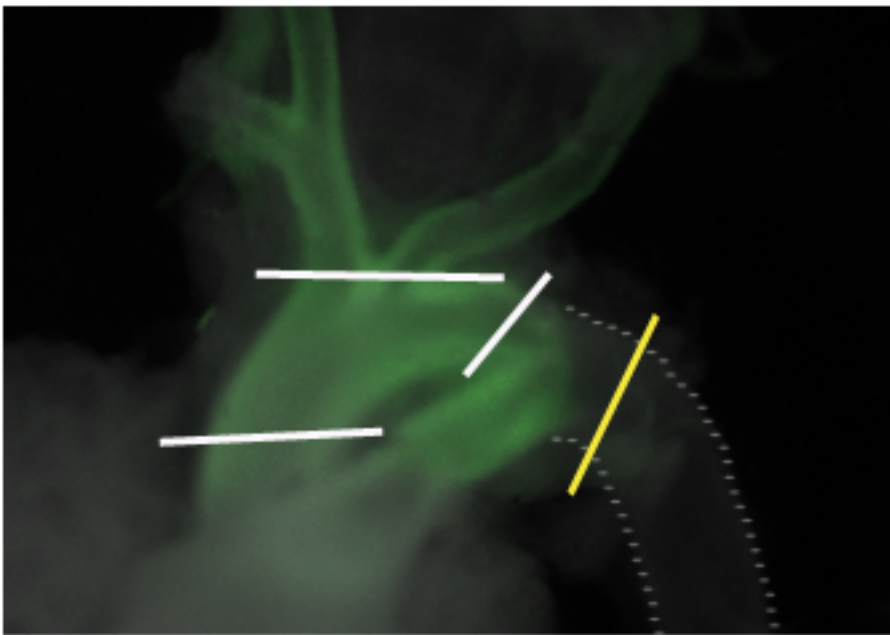


Supplemental Table 1

<b>Gene Name</b>	<b>Forward Primer 5'-3'</b>	<b>Reverse Primer 5'-3'</b>
Desmocollin 3	TTGACCAAGAGGGTAAATCA	GAATTATCTCTGGTGC GTTG
Foxd1	TGTCCAGTGTGGAGA ACTTT	GGAGTCCTACCTTCGCTCT
Integrin beta-8	TGGTGTGTTCAAGAGGATTT	CCTTTGCTTATCAA ACTGGA
Mesothelin	AGACAAATGGACCTTGTGAA	GGTAGGTCTTGTCCAGTTT
Myelin protein zero like 2	ACTGGCTTTCCTGATGTAT	GTAGGACAAAGGGCTGTGA
Robo4	GAGCCAGTGTGTGGAGAAG	AAGGTCTGGAAGAGTTGAGG
HPRT	TACGAGGAGTCCTGTTGATGTTGC	GGGACGCAGCAACTGACATTTCTA

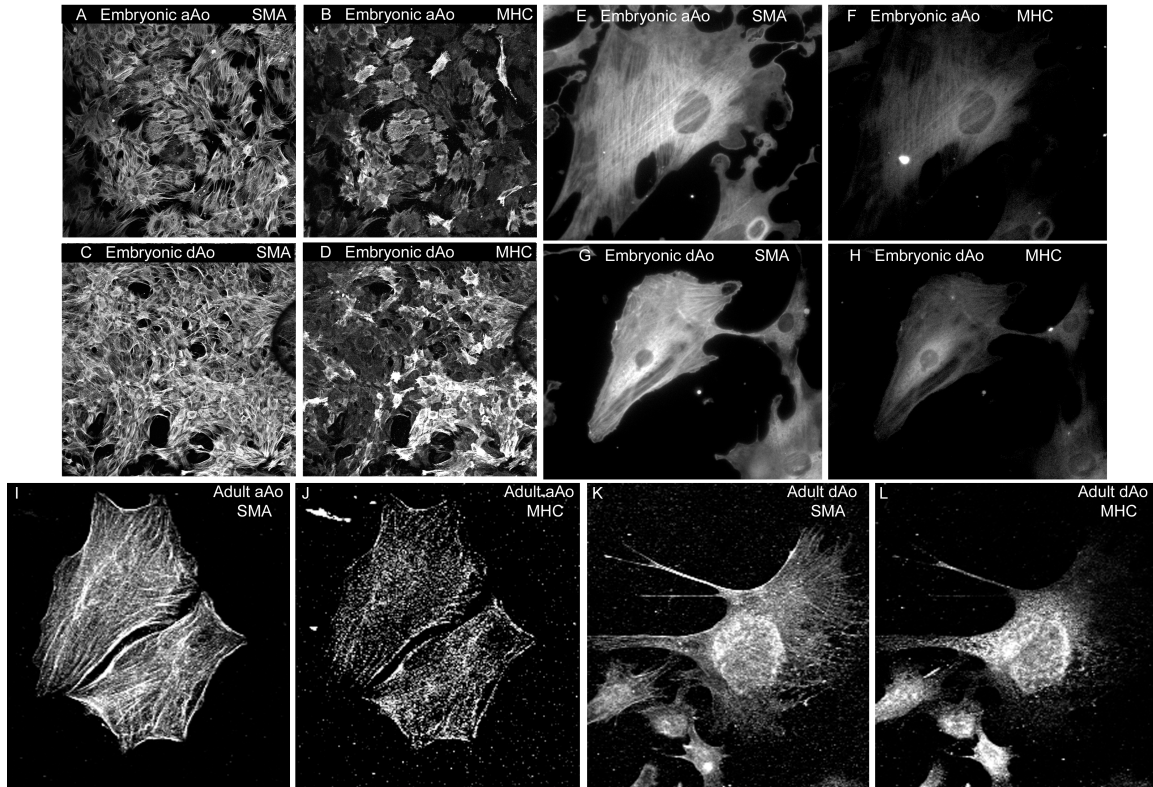
Supplemental Table 1: Real-Time primer sequences used in qRT-PCR analysis.

Supplemental Figure 1



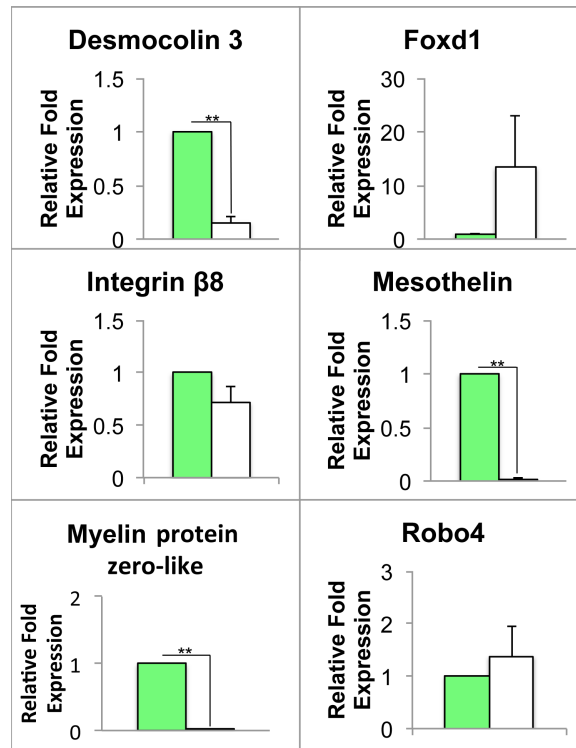
Supplemental Figure 1: Lines of dissection to isolate aAo and dAo. *Wnt1-Cre; R26R<sup>YFP</sup>* lineage labeled aorta demonstrating the border between the aAo and dAo. White solid lines denote dissection to isolate aAo. Yellow solid line indicate dAo dissection. The vessel between the yellow line and the rightmost white line was discarded. White dotted lines shows the margins of the dAo.

## Supplemental Figure 2



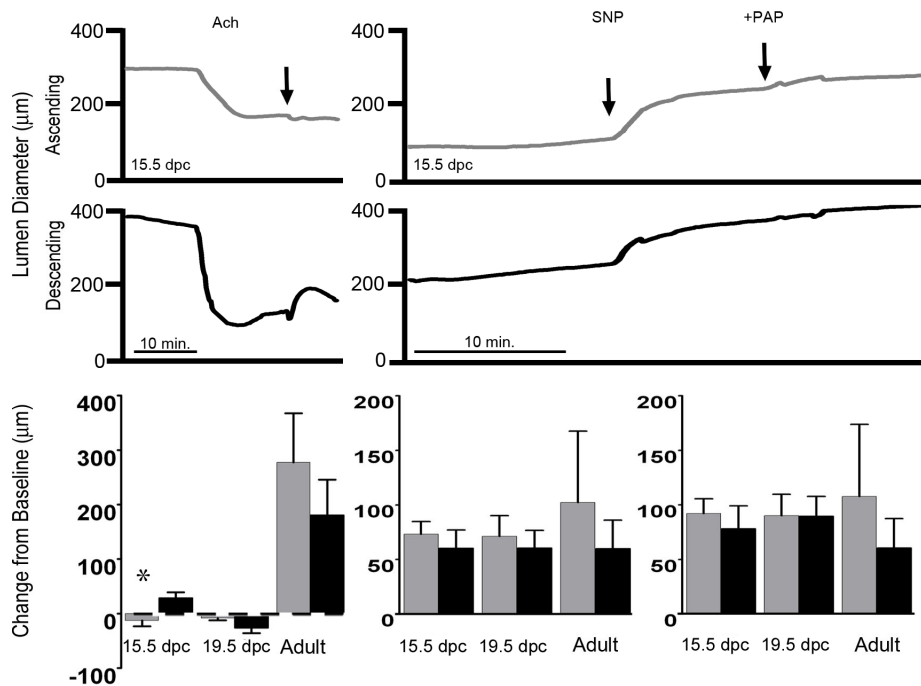
Supplemental Figure 2: Isolated cells express VSMC markers smooth muscle actin (SMA) and smooth muscle myosin heavy chain (MHC). A-D) Explanted embryonic VMSCs three days after plating aorta. E-H) Expression of VMSC markers in clonal embryonic VSMC derived lines. I-L) Expression of VMSC markers in clonal adult VSMC derived lines.

### Supplemental Figure 3



Supplemental Figure 3: Isolated embryonic VSMCs differentially express genes related to cell adhesion and cell migration. qRT-PCR on RNA from cell lines demonstrating the relative expression of candidate genes. Green bars represent aAo VSMC line gene expression; white bars represent dAo VSMC line gene expression. Error bars represent SEM. \*,  $p \leq 0.05$ ; \*\*,  $p \leq 0.01$ .

## Supplemental Figure 4



Supplemental Figure 4: Vasodilators do not elicit a patterned response in the regions of the aorta. Whole vessel myography with the application of vasodilators. aAo (gray) and dAo (black) dilate to a similar degree in both embryonic and adult aortae. Ach, acetylcholine; SNP, sodium nitroprusside; PAP, papaverine.