

Supplemental figure legends:

Supplemental Figure 1. Cryo-sectioning of mouse aortic root and arch. A. The base of the heart with aortic root was frozen, embedded in OCT, and serial sections were obtained every 50 μm by cryostat sectioning, used for Oil Red O staining. The aortic arch was formalin fixed and paraffin embedded, and the ascending aorta was sectioned similarly and stained for immunohistochemistry. B. An example of a complete section of paraffin embedded aortic arch from an LDL receptor deficient mouse fed HFHS diet is shown. The early atherosclerotic lesion is shown at the inner curvature, which is identified by the thicker smooth muscle layer of the arch produced by the greater angle at which the inner curvature of the arch is sectioned. An example of a cryo-section on the arch stained with oil red O is shown in Figure 2.

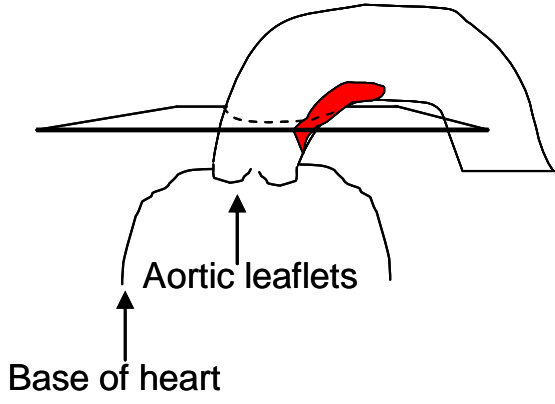
Supplemental Figure 2. S17834 prevents $\text{TNF}\alpha$ -induced increase in apoptotic cell number. Annexin-V positive, propidium iodide positive cells in 10,000 cells counted after treatment with each of the indicated conditions for 6 hours. Asterisks indicate that $\text{TNF}\alpha$ (50 ng/mL) significantly increased apoptotic cell number (n=3). S17834 (0.625 μM), but not lower concentrations prevented the significant $\text{TNF}\alpha$ -induced increase in apoptotic cell number.

Supplemental Figure 3. Aortic root sections within the valve leaflets of $\text{LDLr}^{-/-}$ mice fed normal diet stained for p53 lysine-382 acetylation (left) and cleaved caspase-3 (right). Staining was observed within atherosclerotic lesions (top, 100x magnification) as well as in some endothelial cells within the lesion prone areas around the valve cusps (bottom, 400 x magnification).

Supplemental Figure 4: Total p53 staining of mouse aortic arch. Examples are shown of staining for total p53 in the lesion prone endothelium of the aortic arch from mice fed normal chow, HFHS diet, or HFHS diet with S17834. The staining was diffuse, but distinct cellular staining was observed in endothelial cells.

Supplemental Figure 1:

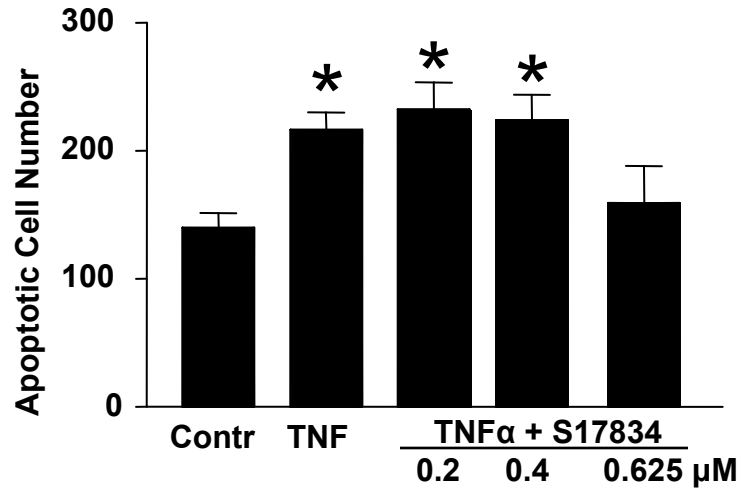
A.



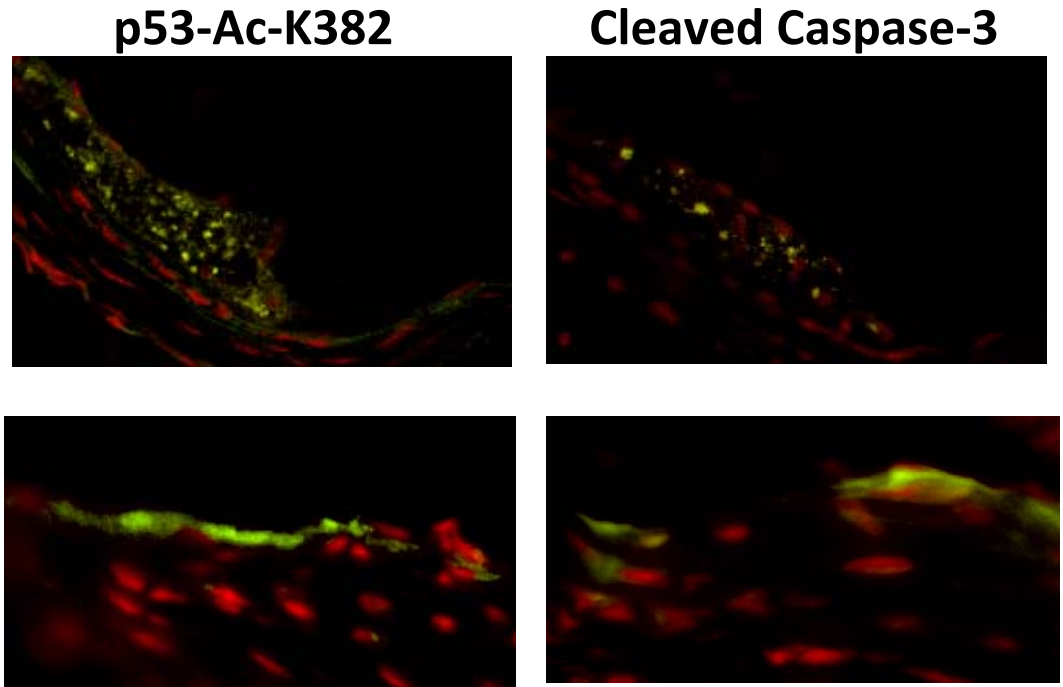
B.



Supplemental Figure 2:



Supplemental Figure 3:



Supplemental figure 4 :

Total p53 Staining

ND

HFHS

HFHS+S17834

