Supplementary Figure 1. Circulating plasma markers of elastinolysis and collagen biogenesis are not significantly altered in diabetic SM22-Cre;Msx1(fl/fl);Msx2(fl/fl);LDLR-/- mice vs. control sibling cohorts. Desmosine (upper panel) and type I collagen pro-peptide (P1NP; lower panel) were assayed in fasting plasma samples obtained from male Msx1(fl/fl);Msx2(fl/fl);LDLR-/- mice and male SM22-Cre;Msx1(fl/fl);Msx2(fl/fl);LDLR-/- sibling cohorts following 3 months of high fat diabetogenic diet challenge. No significant differences were noted.
Supplementary Figure 2. Transduction with SFG-Wnt7b retrovirus restores Alizarin red staining in primary aortic myofibroblast cultures prepared from SM22-Cre;Msx1(fl/fl);Msx2(fl/fl);LDLR-/- mice. Aortic adventitial myofibroblasts isolated from mice of the indicated genotypes were transduced either with control virus (SFG-LacZ) or with SFG-Wnt7b, then cultured under mineralizing conditions for two weeks. At the end of the treatment period, cells were fixed and stained for calcium deposition with Alizarin red S. Note that Alizarin red S calcium staining is restored in SM22-Cre;Msx1(fl/fl);Msx2(fl/fl); LDLR-/- cultures transduced with SFG-Wnt7b as compared to the SFG-LacZ control. Scale bar = 25 microns.

Alizarin Red S Calcium Staining

| Genotype              | Control (SFG-LacZ) | SFG-Wnt7b |
|-----------------------|--------------------|-----------|
| Cre(-) Msx1(fl/fl);Msx2(fl/fl);LDLR-/- | ![Image](image1.png) | ![Image](image2.png) |
| SM22-Cre+ Msx1(fl/fl);Msx2(fl/fl);LDLR-/- | ![Image](image3.png) | ![Image](image4.png) |

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