Supplementary material

Gene	*Primers sequences*
Mouse GATA2	5`-CACCCCGCCGTATTGAATG-3`
	5`-CCTGCGAGTCGAGATGGTTG-3`
Mouse PAK4	5`-GCTCCAACTCCCTACGCAG-3`
	5`-TGGACCATCCCTCGAAGATTT-3`
Mouse BIM	5`-CGACAGTCTCAGGAGGAACC-3`
	5`-CCTTCTCCATACCAGACGGA-3`
Mouse eNOS	5`-TCAGCCATCACAGTGTTCCC-3`
	5`-ATAGCCCGCATAGCGTATCAG-3`
Human GATA2	5`-GCAACCCCTACTATGCCAACC-3`
	5`-CAGTGGCGTCTTGGAGAAG-3`
Human PAK4	5`-GGACATCAAGAGCGACTCGAT-3`
	5`-CGACCAGCGACTTCCTTCG-3`
Human BIM	5`-TAAGTTCTGAGTGTGACCGAGA-3`
	5`-GCTCTGTCTGTAGGGAG GTAGG-3`
Human eNOS	5'-TAGGTCTTGGGGTTGTCAGG-3`
	5'-TGCTGGCATACAGGACTCAG-3`
18S	5`-TAGAGGGACAAGTGGCGTTC-3`
	5`-TGTACAAAGGGCAGGGACTT-3`

Table S1. Mouse and human PCR primer sequences.

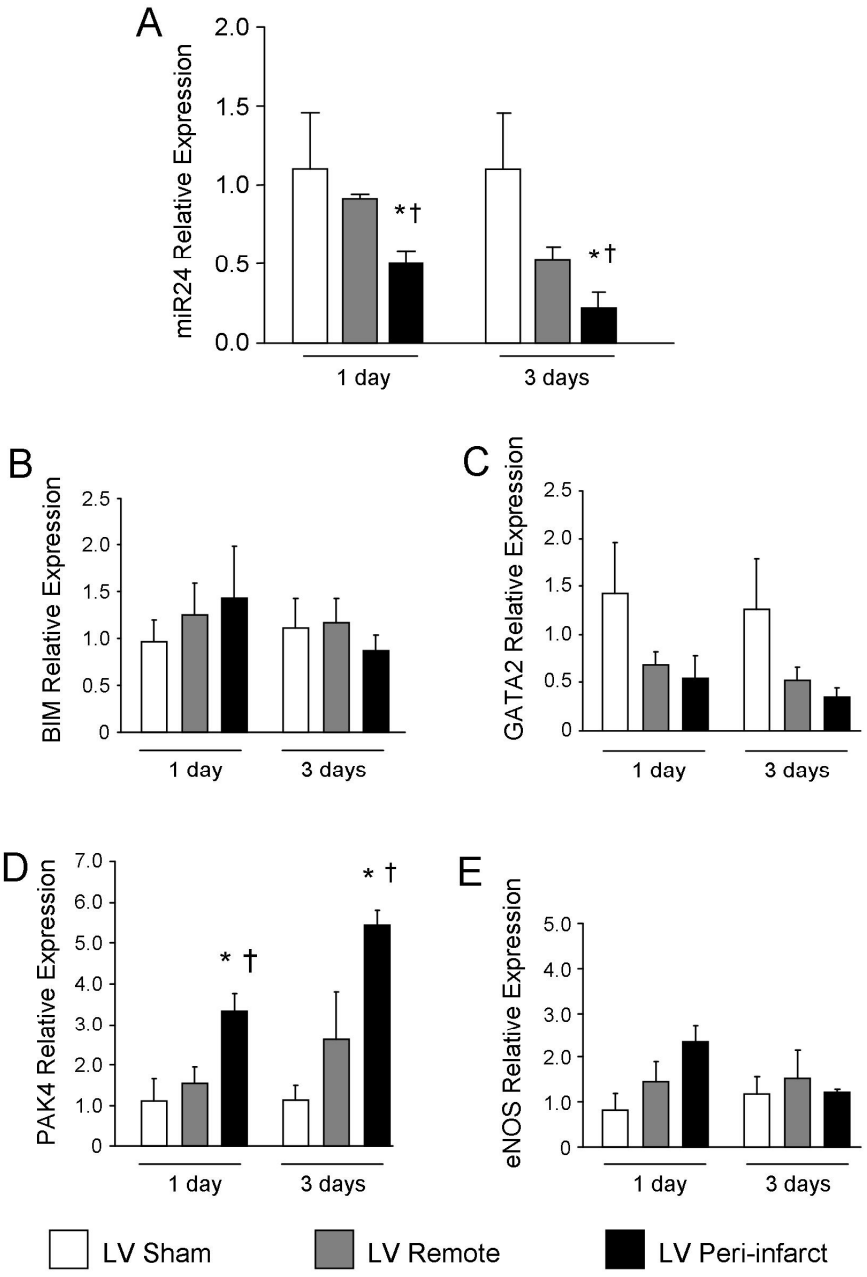

Figure S1. microRNA-24 (miR-24) and target genes expression in the mouse peri-infarct myocardium. Relative expression of miR-24 (A) and its target genes BIM (B), GATA2 (C), PAK4 (D) and eNOS (E) evaluated in cardiac regions isolated at 1 and 3 days after MI or sham operation. Data are expressed as mean±SEM. N=3-4/group. *p<0.05 vs. LV/Sham; †p<0.05 vs. LV remote area.

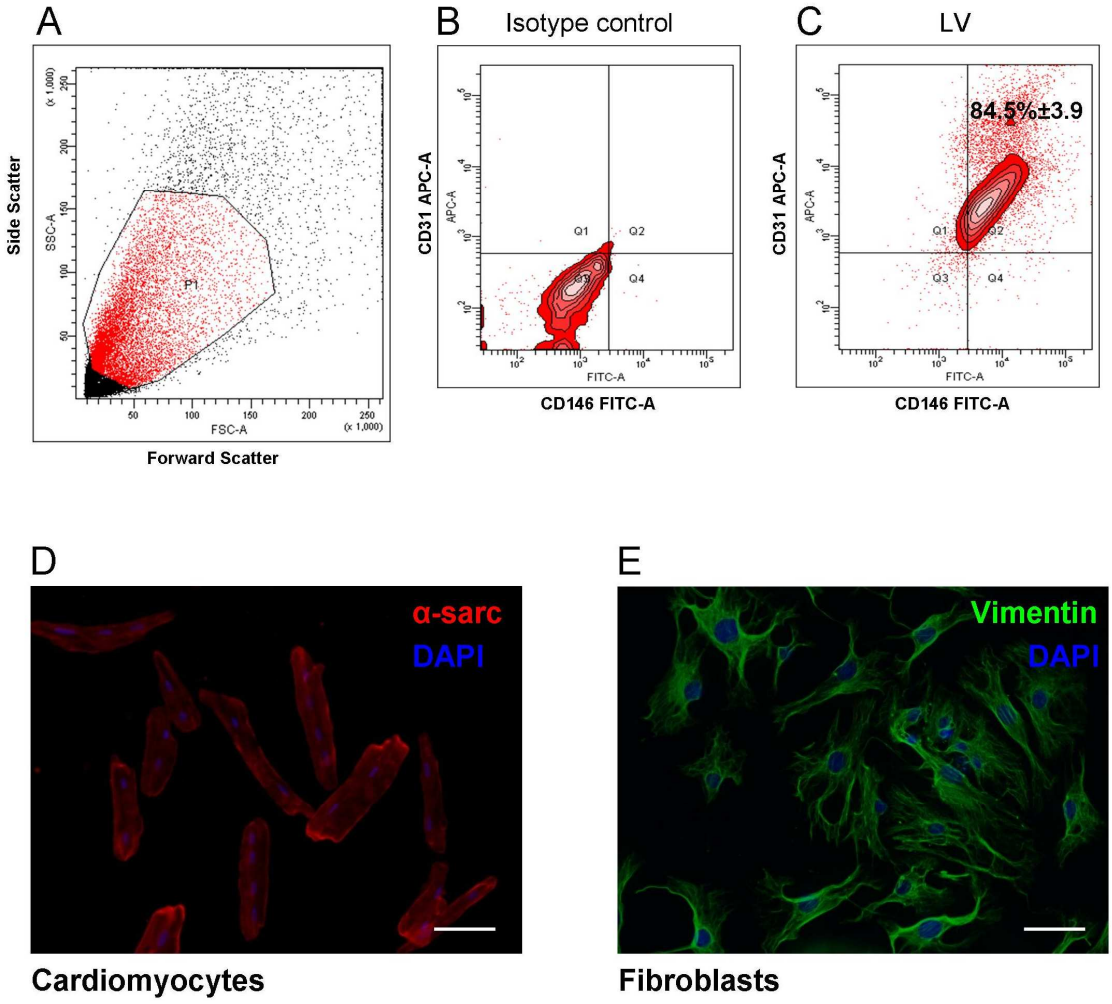

Figure S2. Characterization of cells isolated form the mouse LV. (A-C) Flow cytometric analysis of CD146+ ECs. (A) Forward and side scatter show the total population (in red). (B) Isotype control for CD146+/CD31+ cells. (C) Percentage of double positive CD146/CD31 cells. (N=2 pools of cells coming from a total of 4 LVs). (D) Isolated adult cardiomyocytes after staining for α-sarcomeric actin (in red). Nuclei are counterstained with DAPI (blue). Size bar: 20µm. (E) Isolated fibroblasts after staining for vimentin (in green). Nucleai are depicted in blue (DAPI). Size bar: 20µm.

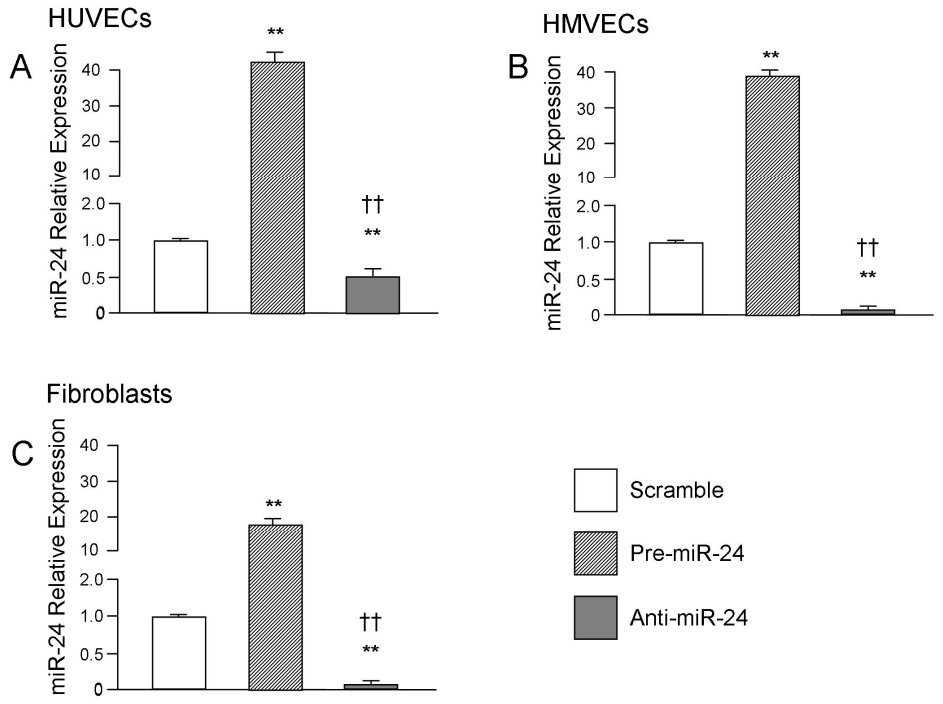

Figure S3. miR-24 relative expression in cultured cells after transfection. miR-24 relative expression in HUVECs (A), HMVECs (B) and mouse cardiac fibroblasts (C) after transfection with pre-miR-24, anti-miR-24, or a negative control (scramble) (each at 50 µM). Small nuclear RNA U6 (snU6) was used for normalization and data are reported to the control group by the 2-ddCt formula. Data are expressed as mean±SEM. N= 2-3/group. **p<0.01 vs. Scramble; ††p<0.01 vs. Pre-miR-24.

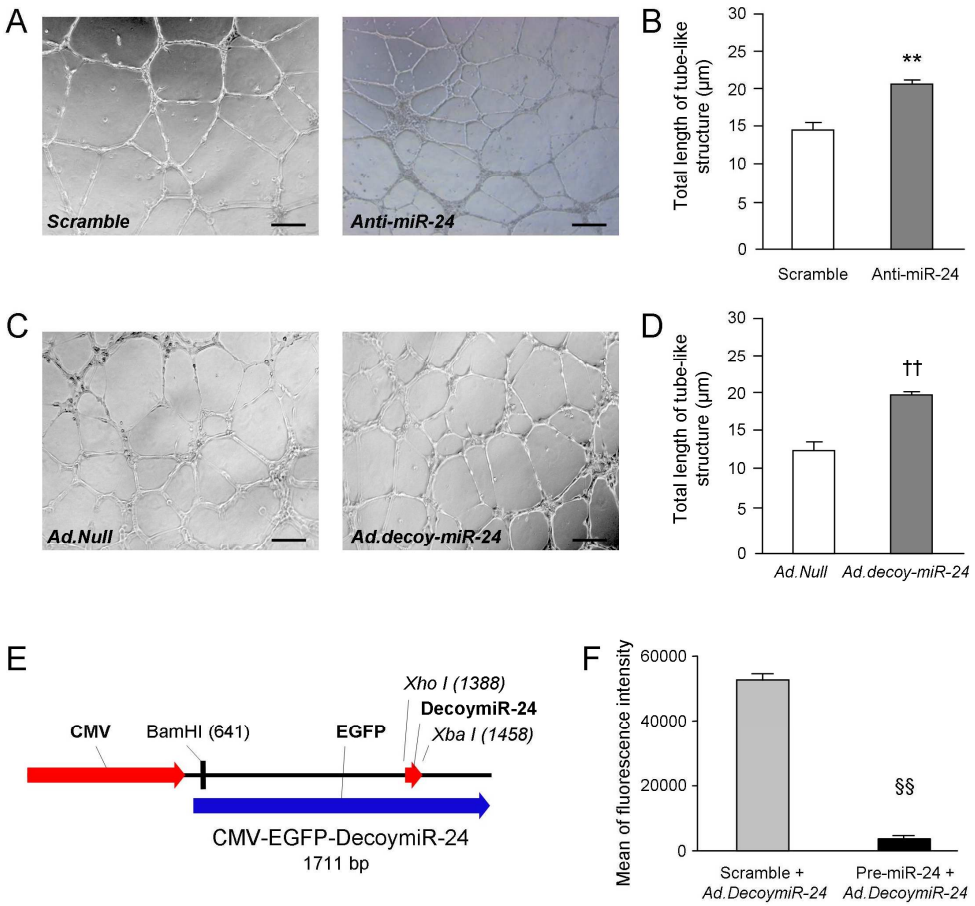

Figure S4. Proangiogenic effect miR-24 inhibition in HUVECs and presentation of the decoy-miR-24. 2D Matrigel assay on HUVECs transfected with Anti-miR-24 or control (Scramble) (A-B) and on HUVECs infected with *Ad.decoymiR-24* or control (*Ad.Null*) (C-D). Photomicrograph show the endothelial network formation (scale bar 20µm) at 5 hours after seeding the infected cells on Matrigel. Bar graphs show total length of tube-like structures. (E) Schematic description of the functional elements in the 3'UTR decoymiR-24 vector. CMV: cytomegalovirus immediate early promoter; eGFP: enhanced green fluorescent protein. (F) Relative mean fluorescence (measured by fluorometry) of HEK293 cells infected with decoy-miR-24 vector together with pre-miR-24 or scrambled oligos (Scramble). Data are expressed as means±SEM. (N=3/group) **p<0.01 vs. Scramble; ††p<0.01 vs. *Ad.Null*; §§p<0.01 vs. Scramble+*Ad.decoymiR-24.*

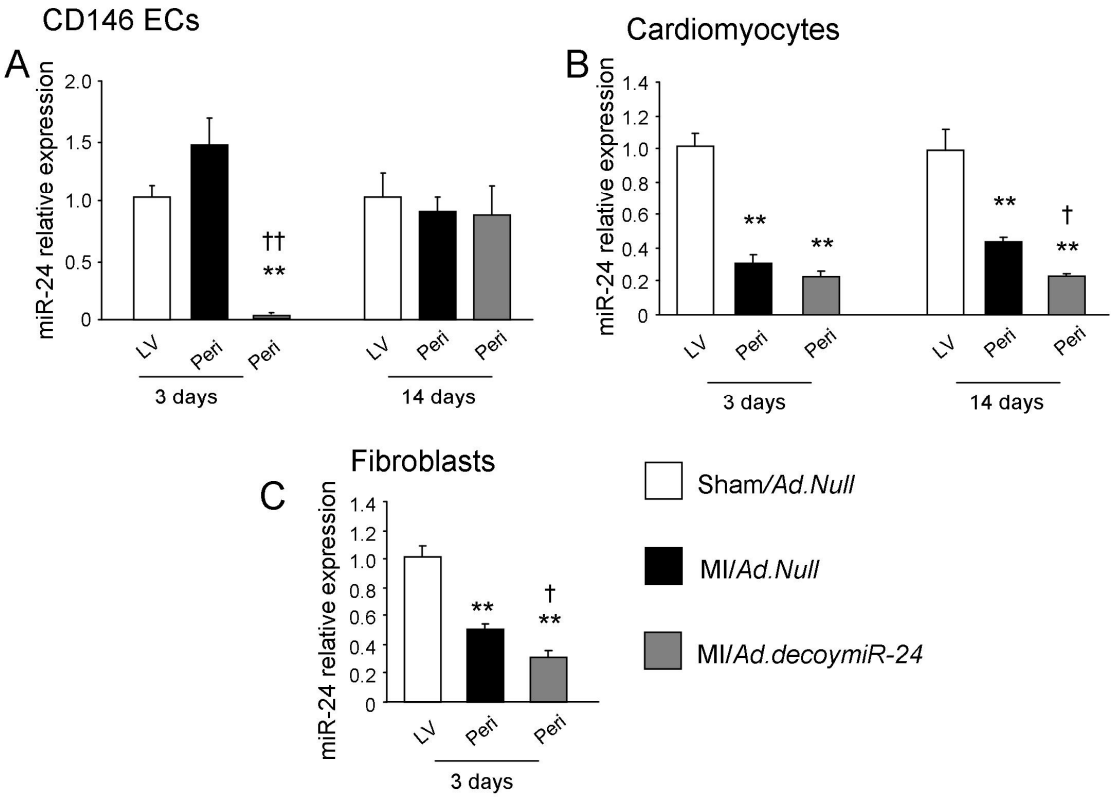

Figure S5. miR-24 expression on cells isolated form the mouse LV after MI and *Ad.decoy*-mediated miR-24 inhibition. miR-24 relative expression on CD146+ ECs (A), cardiomyocytes (B) and cardiac fibroblasts (C) at 3 and 14 days post-MI and gene transfer. Data are expressed as mean±SEM. Cells were combined in pools of 2 samples. N=3-4 pools/group. **p<0.01 vs. Sham/*Ad.Null*; ††p<0.01 and †p<0.05 vs MI/*Ad.Null*.

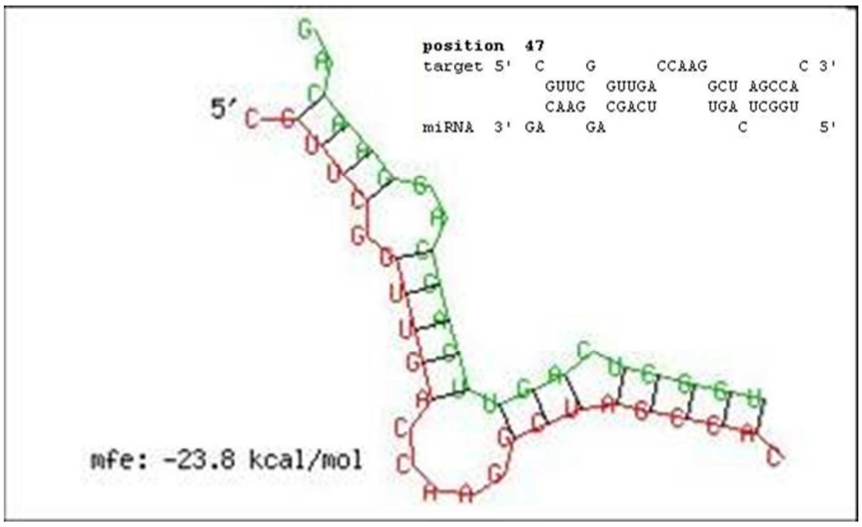

Figure S6. Alignment of human mature miR-24 (red sequence) on mouse eNOS 3`-UTR (green sequence) using RNAhybrid software.