## Supplementary Information

Gene names	Forward (5'-3')	Reverse (5'-3')
H-Cend1	GAAGGAGACCATCCCCCTGA	CAATGAAATCGTGCGGGGTC
H-MECP2	CCGCTCTGCTGGGAAGTATG	GAGCTTTGGGAGATTTGGGC
H-TAGLN	TGGTGGAGTGGATCATAGTGC	CTTCAGGAACTGAGCCACCT
H-HDAC4	GAGAGCGATGAGGAAGAGGC	GACGCCTGGTAGTTCCTCAG
H-PCNA	TCTGAGGGCTTCGACACCTA	CGCGTTATCTTCGGCCCTTA
H-Cnn2	ATGAACAAGCTACAGCCGGG	TCCCACTCTCAAACAGGTCG
H-myh11	GAAGCTCTGGAAGAGGGGAA	TCCGCGTATTTGGAAGAGATG
H-Acta2	AGCGTGGCTATTCCTTCGTT	GCCCATCAGGCAACTCGTAA
H-GAPDH	GGAGTCCACTGGCGTCTTCA	GTCATGAGTCCTTCCACGATACC
H-U6	TGCTTCGGCAGCACATATAC	TCACGAATTTGCGTGTCATC

Supplemental Table 1: Primer sets used in the present study



**Fig. S1** The effect of miR-22 on SMCs in vitro. (a) Fluorescence images of SMCs treated with miR-22 mimics or inhibitors. (b) Relative miR-22 level in SMCs treated with miR-22 mimics or inhibitors. (c) Viability of SMCs treated with miR-22 mimics or inhibitors. (d) Trans-well assays of SMCs treated with miR-22 mimics or inhibitors. (e) The expression of MECP2 and Cyclin D1 in SMCs treated with miR-22 mimics or inhibitors. (f) Relative level of genes HDAC4, MECP2, PCAN, Cyclin D1, TAGLN, Acta 2, Cnn2 and Myh11 in SMCs treated with miR-22 mimics or inhibitors. \* indicates p < 0.05, compared between two groups; \*\* indicates p < 0.01, compared between two groups.



**Fig. S2** The TUNEL staining of vessels treated with PAA/PEI/miR-22-coated balloons after balloon-induced vascular injury. (a) Fluorescence images of TUNEL staining of vessels treated with PAA/PEI/miR-22-coated balloons after balloon-induced vascular injury. Blue color indicates cell nucleus. Red color indicates positively stained cells by TUNEL. (b) Quantification of the TUNEL positive cells.