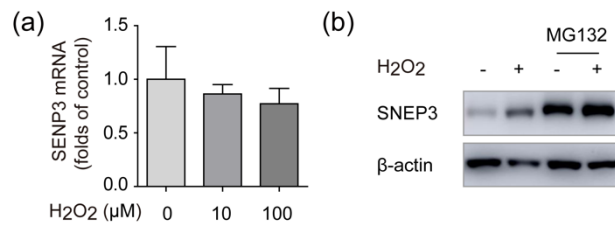
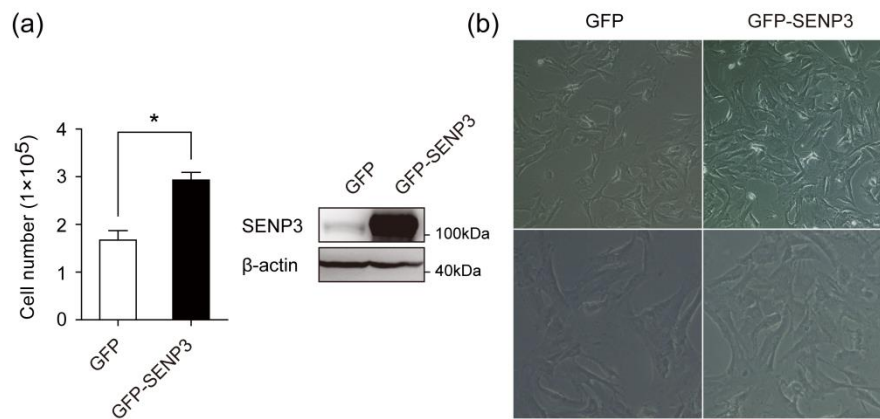


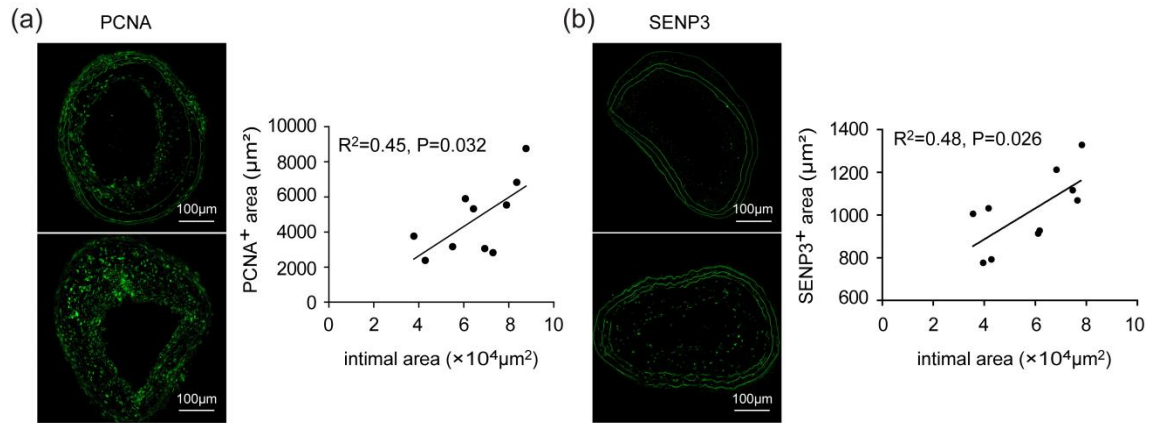
## Supplemental data



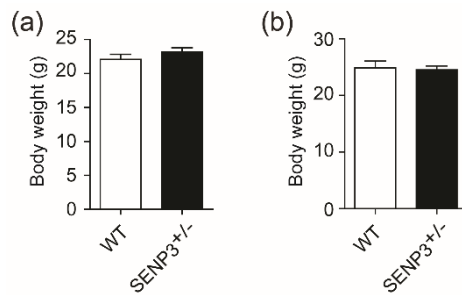
**Fig. S1.** Oxidative stress-induced SENP3 protein expression is through blockage of 26S proteasome-mediated degradation. (a) Primary rat VSMCs were treated with the indicated dose of H<sub>2</sub>O<sub>2</sub> for 1 h. SENP3 mRNA expression was examined by real-time PCR. (b) Primary rat VSMCs were pretreated with or without MG132 (10 μM) for 6 h before H<sub>2</sub>O<sub>2</sub> (100 μM) stimulation for another 1 h. Protein expression of SENP3 was examined by western blotting.



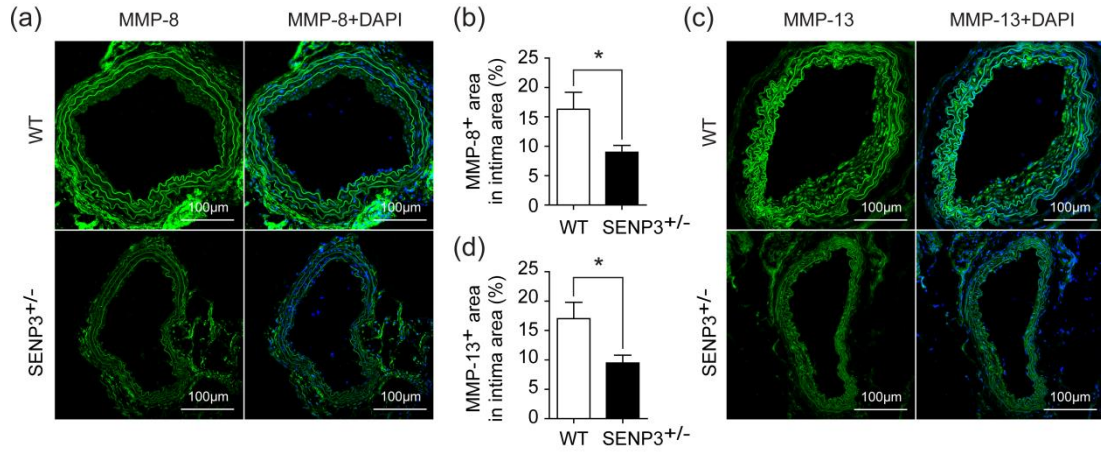
**Fig. S2.** SENP3 overexpression promotes VSMC proliferation. (a) Representative western blotting of SENP3 in VSMCs infected with GFP control lentivirus and GFP-SENP3 lentivirus and quantification by cell counts. (b) Representative images of cell density in GFP-SENP3 lentivirus-infected cells compared with GFP control lentivirus-infected cells under normal growth condition.



**Fig. S3.** Expression of SENP3 and proliferation marker PCNA are correlated with intimal area. (a-b) Correlation between PCNA (a) and SENP3 (b) immunostaining and intimal area ( $*p<0.05$ ,  $n=10$ ).



**Fig. S4.** Body weight in WT and SENP3<sup>+/-</sup> mice. (a-b) Quantification of body weight of WT and SENP3<sup>+/-</sup> mice before and after surgery. Values are mean  $\pm$  SEM.



**Fig. S5.** Immunofluorescence staining of MMP-8 and MMP-13 in remodeled arteries of WT and SENP3<sup>+/-</sup> mice. (a-b) Representative images of immunofluorescence staining of MMP-8 and quantification of percentage of MMP-8-positive area in intima area in WT and SENP3<sup>+/-</sup> mice (\**p*<0.05, n=6). (c-d) Representative images of immunofluorescence staining of MMP-13 and quantification of percentage of MMP-13-positive area in intima area in WT and SENP3<sup>+/-</sup> mice (\**p*<0.05, n=6). Values are mean ± SEM.