Legends:

**Figure S1.** Endothelium-dependent (A) and -independent (B) responses in isolated mesenteric rings from SMC-KO mice (open circles, bars) versus rings from SMC-LM (filled circles, bars), measured *ex vivo* in small wire organ baths. The effect of 12 weeks of treatment with lenrispodun given in drinking water is shown in green. The contribution of NO-independent pathway (L-NAME treatment) after chronic lenrispodun treatment is shown in panel C for aorta rings. *In vivo* cutaneous microvascular reactive hyperemia in SMC-KO mice versus their SMC-LM at the age of 3 month measured with laser Doppler, expressed as (D) area under the curve (AUC) and (E) maximum response (Emax). Relaxations are calculated relative to the contraction produced by U46619 in each ring, which is set at 100%. Values are expressed as means ± SEM; n, number of mice; *, p< 0.05; GLM for repeated measures; #, p<0.05, two-way ANOVA followed by Bonferroni’s post hoc test. In figures D and E, two-sided t-test was used.

**Figure S2.** The mRNA expression of IL-6 in cultured human vascular smooth muscle cells, measured by RT-qPCR technique. Values are expressed as means ± SEM; n=4-7; @, p<0.05, two-sided t-test.
Figure S1

A

B

C

D

E

-10 -9 -8 -7 -6 -5 -4
-100
-80
-60
-40
-20
0
Log ACh (mol/L)
Relaxation (%)
SMC-LM (vehicle)(n=7)
SMC-KO (vehicle)(n=6)
SMC-LM (lenrispodun)(n=5)
SMC-KO (lenrispodun)(n=5)
*

-10 -9 -8 -7 -6 -5 -4
-100
-80
-60
-40
-20
0
Log ACh (mol/L)
Relaxation (%)
SMC-LM (vehicle)(L-NAME)(n=8)
SMC-KO (vehicle)(L-NAME)(n=10)
SMC-LM (lenrispodun)(L-NAME)(n=12)
SMC-KO (lenrispodun)(L-NAME)(n=12)
*

-100
-50
0
50
100
150
200
AUC
3 month

-100
-50
0
50
100
150
200
AUC
3 month

0
10
20
30
40
50
Emax
3 month

0
10
20
30
40
50
Max response
(% of baseline)
Figure S2

The figure shows the expression levels of IL-6 in VSMC (vascular smooth muscle cells) over time: 6hrs, 12hrs, 24hrs, 4days, 7days, and 11days. The y-axis represents the relative quantification (RQ) of IL-6, with values ranging from 0 to 20. The x-axis lists the time points.

- **Control** (filled circles) and **UV+** (open circles) are compared across different time points.

The graph indicates significant differences between Control and UV+ groups at certain time points, marked with symbols. The specific details of these differences are not provided in the text but are highlighted in the figure.