Supplemental Material

Table S1. qPCR primer sequences.

qPCR primer sequences

Gene	Forward primer 5’-3’	Reverse primer 5’-3’
β-actin	CATCCTCTTCCTCCCTGGAGAAGA	ACAGGATTCCATACCCAAGAAGGA
NOX1	CATAAGGGGAGTTGCAGGCA	AATCACGACCTTCTGCTGGG
NOX2	ACCTCCTCTTCCCCAGATCC	ACCCTAGCCTGCTTATGGGA
NOX4	TAGGCTCCAGGCAAACACTG	TTAGGAACACTGCAGCGAGG
SOD1	CAAGCGGTGAACCAGTTGTG	CAGTCACATTGCCCAGGTCT
SOD2	ACCGAGGAGAAGTACCACGA	GCCTCCAGCAACTCTCCTTT
CAT	TTATTCCTGTGCTGTGCGGT	GCAACCAAACACGGTCCTTC
IL-1β	CAACCAACAAGTGATATTCTCCATG	GATCCACACTCTCCAGCTGCA
IL-10	TGAGGCGCTGTCGTCATCGATTTCTCCC	ACCTGCTCCACTGCCTTGCT

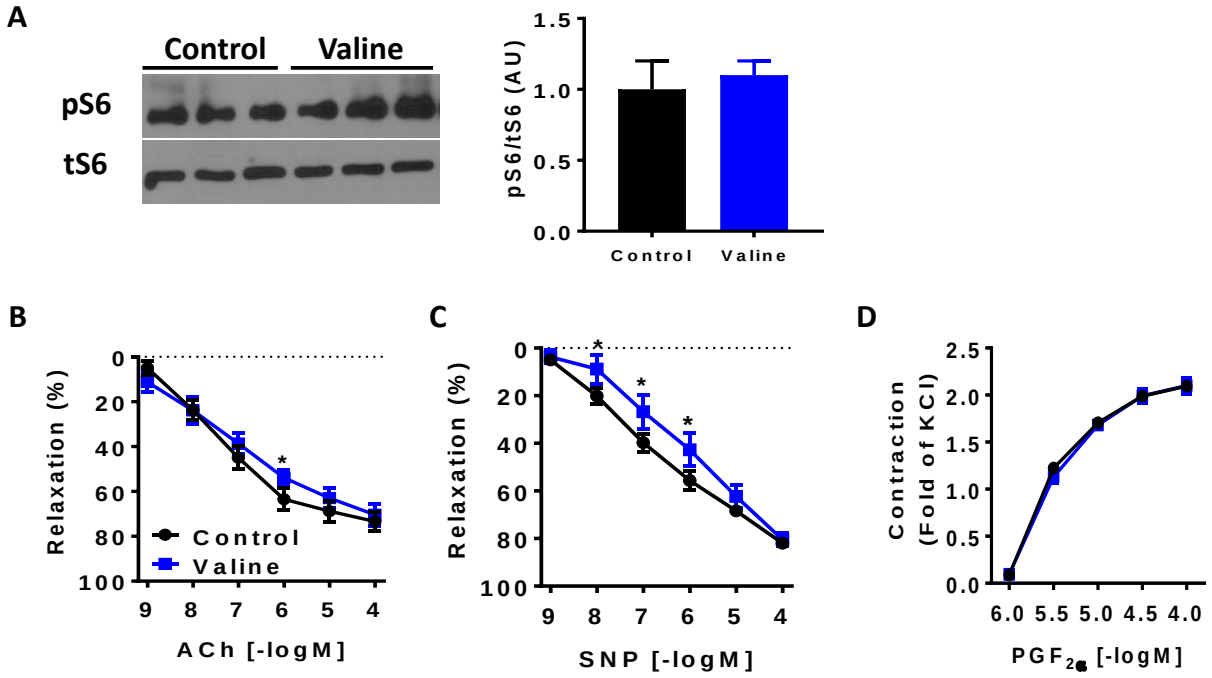
Primer sequences used for qPCR experiments in this study.

Table S2. Aortic ring EC_{50} and E_{max} values.

ACh	CONTROL	LEUCINE	LEUCINE +S6KDN
$-\log EC_{50}$	7.2 ± 0.1	6.7 ± 0.1*	7.0 ± 0.2
E_{max}	74.2 ± 4.3	63.9 ± 5.3	67.9 ± 2.3
ACh	**Ad-GFP**	**Ad-S6KCA**	**Ad-S6KCA +Tempol**
$-\log EC_{50}$	7.6 ± 0.1	6.4 ± 0.3*	6.9 ± 0.1†
E_{max}	77.9 ± 2.4	70.2 ± 3.5	74.6 ± 2.0

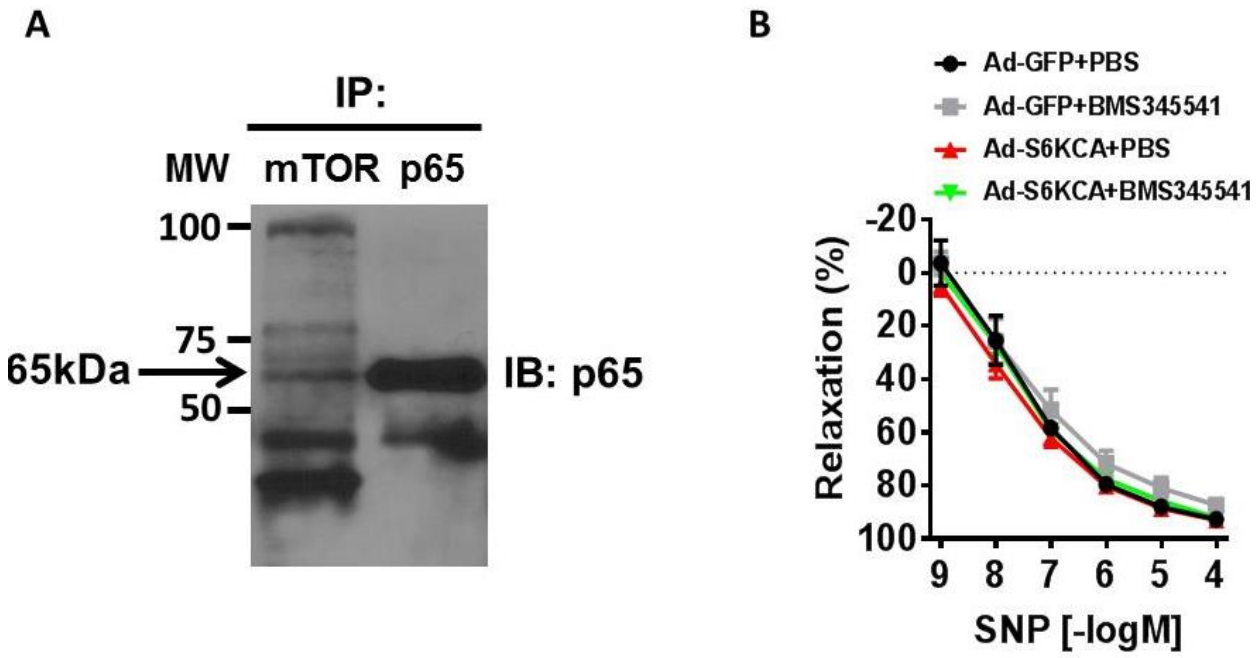
Calculated EC_{50} and E_{max} values for leucine stimulated and Ad-S6KCA infected aortic rings. *$p<0.05$ vs control; †$p<0.05$ vs Ad-S6KCA.

Figure S1. Valine does not activate mTORC1 signaling in aortic rings ex vivo.



(**A**) Representative western blot images of phospho- and total S6 expression and quantification data (expressed as arbitrary units) of aortic rings cultured in control (0.45mM) or valine-supplemented (10mM) media. Vascular reactivity responses of aortic rings to (**B**) endothelial-dependent acetylcholine, (**C**) endothelial-independent sodium nitroprusside, and contractile responses to (**D**) prostaglandin $F_{2\alpha}$ (n=10/group). Of note, the control group is reproduced from Figures 1C-E. *p<0.05 vs control.

Figure S2. mTOR physically interacts with the p65 subunit of the NFκB transcriptional complex.



(**A**) Representative western blot image of MLECs immuno-precipitated with antibodies for mTOR and p65 subunit of the NFκB transcriptional complex. (**B**) Vascular reactivity responses of adenoviral infected aortic rings treated with BMS-345541 (300nM) or vehicle (PBS) for 16hrs to endothelial-independent sodium nitroprusside (n=5/group).