

Vasoconstrictor	Dosages	Expected response and usages	REF
Acetylcholine	0.1~10 μ M	<ul style="list-style-type: none"> - Airway contraction with reduced lumen area by 60% within 2 min. -After 5 min, the average decreased airway luminal area was 57%. - Upon washout, the airway relaxed to ~90% of its initial size within 3 min. - The arterioles had no contractile response. 	[13]
5-hydroxytryptamine	0.1~10 μ M	<ul style="list-style-type: none"> - Induce contraction of both the airway and arteriole. - Reduces the luminal area by 41% after 5 min, and arteriole up to 80% within 2 min. - Upon washout, the airway relaxed quickly, whereas the arteriole relaxation occurs more slowly. 	[14]
KCl*	10~100 mM	<ul style="list-style-type: none"> - A large reduction of the arterial lumen - A small reduction of the airway lumen - After 5 min, a luminal reduction in airways of 14% and arterioles of 64%. - Removal resulted in arteriole and airway relaxation although some airways continued to display transient contractions. - Mostly used as a positive control in research. 	[15-18]
Methacholine	0.2~10 μ M	<ul style="list-style-type: none"> - Induces a sustained concentration-dependent contraction of the airway without a change in the $[Ca^{2+}]$. - The airway displayed a large reduction in lumen area in 5 min - Removal of Methacholine, the $[Ca^{2+}]$ oscillations stop and the airways immediately relax. 	[3, 19]
Endothelin-1*	1 nM~1 μ M	<ul style="list-style-type: none"> -A potent powerful endogenous vasoconstrictor, mainly secreted by endothelial cells - Vasoconstricting both the afferent and efferent arterioles. - Submucosal arterioles have a high affinity. - Constriction occurs up to 79%. 	[20, 21]
Angiotensin II	0.1~10 nM	<ul style="list-style-type: none"> - Induces a significantly blunted vasoconstriction in PI3Kγ-deficient vessels - Acts systemically to cause vasoconstriction as well as constriction of both the afferent and efferent arterioles of the glomerulus. 	[22, 23]