

# (R) - (-) -Phenylephrine (hydrochloride)

Catalog No: tcsc2585



## Available Sizes

Size: 100mg

Size: 500mg



## Specifications

### CAS No:

61-76-7

### Formula:

$C_9H_{14}ClNO_2$

### Pathway:

GPCR/G Protein

### Target:

Adrenergic Receptor

### Purity / Grade:

>98%

### Solubility:

DMSO :  $\geq 150$  mg/mL (736.49 mM)

### Alternative Names:

Phenylephrine hydrochloride

### Observed Molecular Weight:

203.67

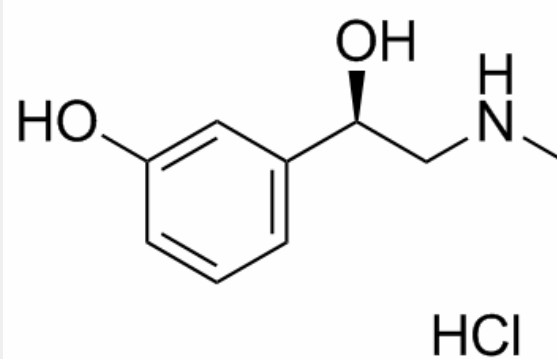
## Product Description

(R)-(-)-Phenylephrine hydrochloride is a selective  **$\alpha_1$ -adrenoceptor** agonist with **pK<sub>i</sub>s** of 5.86, 4.87 and 4.70 for  $\alpha_{1D}$ ,  $\alpha_{1B}$  and  $\alpha_{1A}$  receptors respectively.

IC50 & Target: pKi: 5.86 ( $\alpha_1D$ ), 5.86 ( $\alpha_1B$ ), 5.86 ( $\alpha_1A$ )<sup>[1]</sup>

***In Vitro:*** (R)-(-)-Phenylephrine is a selective  **$\alpha_1$ -adrenoceptor** agonist with pK<sub>i</sub> values of 5.86, 4.87 and 4.70 for  $\alpha_{1D}$ ,  $\alpha_{1B}$  and  $\alpha_{1A}$  receptors respectively<sup>[1][2]</sup>. Phenylephrine promotes cardiac fibroblast proliferation. Phenylephrine activates CaN and evokes NFAT3 nuclear translocation. It suggests that the Ca(<sup>2+</sup>)/CaN/NFAT pathway mediates phenylephrine -induced cardiac fibroblast proliferation, and this pathway might be a possible therapeutic target in cardiac fibrosis<sup>[3]</sup>.

***In Vivo:*** Perfusion of hearts with 100  $\mu$ M phenylephrine causes a rapid (maximal at 10 min) 12-fold activation of two p38-MAPK isoforms.  $\alpha_1$ -adrenoceptor agonists such as phenylephrine increase the contractility of the heart. Phenylephrine also activates SAPKs/JNKs in neonatal ventricular myocytes<sup>[4]</sup>. Phenylephrine could increase the alveolar fluid clearance in high tidal volume-ventilated rats and accelerate the absorption of pulmonary edema<sup>[5]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!