Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

(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 : ≥ 150 mg/mL (736.49 mM)

Alternative Names:
Phenylephrine hydrochloride

Observed Molecular Weight:
203.67

Product Description

(R)-(-)-Phenylephrine hydrochloride is a selective **α_1-adrenoceptor** agonist with **pK_is** of 5.86, 4.87 and 4.70 for α_{1D}, α_{1B} and α_{1A} receptors respectively.

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IC50 & Target: pKi: 5.86 (α1D), 5.86 (α1B), 5.86 (α1A)[1]

In Vitro: (R)-(-)-Phenylephrine is a selective **α_1-adrenoceptor** agonist with pK_i values of 5.86, 4.87 and 4.70 for α_{1D}, α_{1B} and α_{1A} receptors respectively[1][2]. Phenylephrine promotes cardiac fibroblast proliferation. Phenylephrine activates CaN and evokes NFAT3 nuclear translocation. It suggests that the $Ca(^{2+})$/CaN/NFAT pathway mediates phenylephrine -induced cardiac fibroblast proliferation, and this pathway might be a possible therapeutic target in cardiac fibrosis[3].

In Vivo: Perfusion of hearts with 100 μM phenylephrine causes a rapid (maximal at 10 min) 12-fold activation of two p38-MAPK isoforms. α_1-adrenoceptor agonists such as phenylephrine increase the contractility of the heart. Phenylephrine also activates SAPKs/JNKs in neonatal ventricular myocytes[4]. Phenylephrine could increase the alveolar fluid clearance in high tidal volume-ventilated rats and accelerate the absorption of pulmonary edema[5].