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

Phenoxybenzamine (hydrochloride)

Catalog No: tcsc2537

Available Sizes

Size: 200mg

Size: 500mg

Size: 1g

Specifications

CAS No:
63-92-3

Formula:
$C_{18}H_{23}Cl_2NO$

Pathway:
GPCR/G Protein

Target:
Adrenergic Receptor

Purity / Grade:
>98%

Solubility:
DMSO : 100 mg/mL (293.87 mM; Need ultrasonic)

Observed Molecular Weight:
340.29

Product Description

Phenoxybenzamine hydrochloride is a selective antagonist of both **α-adrenoceptor** and **calmodulin** that is commonly used for the treatment of hypertension, specifically caused by pheochromocytoma.

In Vitro:

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The IC_{50} (100 nM) derived from the blockade of [^{3}H]yohimbine binding by Phenoxybenzamine hydrochloride is significantly less than the IC_{50} (550 nM) for the corresponding reversal by Phenoxybenzamine hydrochloride of the effects of norepinephrine on cyclic AMP accumulation[1]. Phenoxybenzamine hydrochloride (50 nM) in conbination with Phenoxybenzamine hydrochloridetolamine (1000 nM) enhances Phenoxybenzamine hydrochlorideylephrine-induced contraction compared with pretreatment with Phenoxybenzamine hydrochloride (50 nM) alone in endothelium-intact aortae. Combined treatment with either dexmedetomidine (300 or 1000 nM) and Phenoxybenzamine hydrochloride (50 nM) or Phenoxybenzamine hydrochloridetolamine (1000 nM) and Phenoxybenzamine hydrochloride (50 nM) enhance Phenoxybenzamine hydrochlorideylephrine-induced contraction compared with Phenoxybenzamine hydrochloride alone (50 nM). In addition, combined treatment with Phenoxybenzamine hydrochloridetolamine and Phenoxybenzamine hydrochloride enhances Phenoxybenzamine hydrochlorideylephrine-induced contraction compared with dexmedetomidine (1000 nM) and Phenoxybenzamine hydrochloride combined treatment. Combined treatment with high concentrations of dexmedetomidine (1000 nM) and Phenoxybenzamine hydrochloride enhances Phenoxybenzamine hydrochlorideylephrine-induced contraction compared with combined treatment with low concentrations of dexmedetomidine (300 nM) and Phenoxybenzamine hydrochloride[2]. Phenoxybenzamine hydrochloride (0.1-100 μM) inhibits glioma proliferation, migration, and invasion and suppresses the tumorigenesis capacity. Phenoxybenzamine hydrochloride also inhibits self-renewal of glioma stem-like cells. Phenoxybenzamine hydrochloride activates LINGO-1 and inhibits the TrkB-Akt pathway[3]. Phenoxybenzamine hydrochloride (0.1 μM-1 mM) preserves primary neurons within the CA1, CA3 and dentate gyrus and produces a robust neuroprotective effect, and prevents neuronal death from OGD in all regions of the hippocampus when delivered at 2, 4, and 8 h post-OGD at 100 μM[4].

In Vivo: Phenoxybenzamine hydrochloride (20 nM, s.c.) effectively suppresses the tumorigenesis of glioma cells in mice and the cell density in Phenoxybenzamine hydrochloride-U87MG xenografts decreases significantly[3]. Phenoxybenzamine hydrochloride (1 mg/kg, i.v.) treated rats shows significant improvements in NSS and foot fault scoring[4].