

# Phenoxybenzamine (hydrochloride)

## Catalog No: tcsc2537

Available Sizes

Size: 200mg

Size: 500mg

Size: 1g

Specifications

CAS No:<br/>63-92-3

Formula:<br/>C18H23Cl2NO

Pathway:<br/>GPCR/G Protein

Target:<br/>Addenergic Receptor

**Purity / Grade:** 

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  $\alpha$ -adrenoceptor and calmodulin that is commonly used for the treatment of hypertension, specifically caused by pheochromocytoma.

#### In Vitro:

Copyright 2021 Taiclone Biotech Corp.



The IC<sub>50</sub> (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<sup>[1]</sup>. 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<sup>[2]</sup>. Phenoxybenzamine hydrochloride (0.1-100  $\mu$ M) inhibits glioma proliferation, migration, and invasion and suppresses the tumorigenesis capacity. Phenoxybenzamine hydrochloride also inhibits self-renewal of glioma stemlike cells. Phenoxybenzamine hydrochloride activates LINGO-1 and inhibits the TrkB-Akt pathway<sup>[3]</sup>. 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  $\mu$ M<sup>[4]</sup>.

*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<sup>[3]</sup>. Phenoxybenzamine hydrochloride (1 mg/kg, i.v.) treated rats shows significant improvements in NSS and foot fault scoring<sup>[4]</sup>.





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

Copyright 2021 Taiclone Biotech Corp.