# Anisodamine hydrobromide

**Cat. No.:** HY-N0584A

**CAS No.:** 55449-49-5

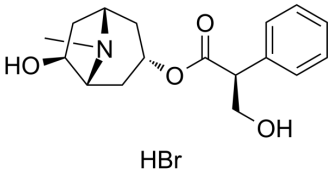
**Molecular Formula:** $C_{17}H_{24}BrNO_4$

**Molecular Weight:** 386.28

**Target:** mAChR

**Pathway:** GPCR/G Protein; Neuronal Signaling

**Storage:** 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)




## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 100 mg/mL (258.88 mM; Need ultrasonic)

| Preparing Stock Solutions | Mass / Solvent / Concentration | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 2.5888 mL | 12.9440 mL | 25.8880 mL |
| | 5 mM | 0.5178 mL | 2.5888 mL | 5.1776 mL |
| | 10 mM | 0.2589 mL | 1.2944 mL | 2.5888 mL |

Please refer to the solubility information to select the appropriate solvent.

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.38 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.38 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.38 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

Anisodamine hydrobromide (6-Hydroxyhyoscyamine hydrobromide), a belladonna alkaloid, is a non-subtype-selective muscarinic and a nicotinic cholinoceptor antagonist. Anisodamine hydrobromide shows antioxidant, anti-inflammatory properties[1][2].

**$IC_{50}$ & Target**

Nicotinic cholinoceptor[1]

**In Vitro**

Anisodamine hydrobromide (100 μg/mL; 20 minutes; RAW264.7 cells) pretreatment for 20 minutes before Ach results in significantly attenuated average fluorescence intensity of α-bungarotoxin binding compared with Ach alone[2].

| | |
|---|---|
| | Anisodamine hydrobromide action might be through blockade of muscarinic receptors and thus allowing more endogenous ACh binding to the α-7nAChR[2].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |
| **In Vivo** | Anisodamine hydrobromide (50 mg/kg; i.p.; 72 hours) markedly decreases the mortality to 20%[2].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

| | |
|---|---|
| Animal Model: | LPS-Induced Shock Mice[2] |
| Dosage: | 50 mg/kg |
| Administration: | I.p. |
| Result: | Markedly decreased the mortality to 20%. |

## REFERENCES


[1]. Eisenkraft A. Possible role for anisodamine in organophosphate poisoning. Br J Pharmacol. 2016;173(11):1719-1727.

[2]. Liu C, et al. Antishock effect of anisodamine involves a novel pathway for activating alpha7 nicotinic acetylcholine receptor. Crit Care Med. 2009;37(2):634-641.





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