Propiverine hydrochloride

Cat. No.: HY-116408A

CAS No.: 54556-98-8

Molecular Formula: $C_{23}H_{30}ClNO_3$

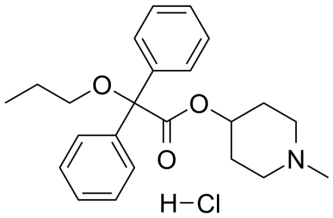
Molecular Weight: 403.94

Target: mAChR; Calcium Channel

Pathway: GPCR/G Protein; Neuronal Signaling; Membrane Transporter/Ion Channel

Storage: 4°C, sealed storage, away from moisture

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (123.78 mM; Need ultrasonic)

H_2O : 50 mg/mL (123.78 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.4756 mL	12.3781 mL	24.7562 mL
5 mM	0.4951 mL	2.4756 mL	4.9512 mL
10 mM	0.2476 mL	1.2378 mL	2.4756 mL

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

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 100 mg/mL (247.56 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (6.19 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (6.19 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (6.19 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Propiverine hydrochloride is a bladder spasmolytic with calcium antagonistic and anticholinergic properties. Propiverine hydrochloride can be used for the research of overactive blaqdder and urinary incontinence[1][2].

In Vitro

Propiverine (10-3000 nM) inhibits the specific binding of [^{3}H]NMS, with K_is of 339, 193 and 497 nM in the bladder, submaxillary gland and heart of mice respectively[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Propiverine (0.5 mg/day; p.o. once daily for 2 weeks) significantly increases UBP and LPP during passive intravesical pressure elevation, and also increases plasma norepinephrine and epinephrine levelsin rats[1].
Propiverine (0.01-1 mg/kg; i.v.) decreases the UBP and totally suppresses the sneeze reflex at the dose of 1 mg/kg in vivo[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female adult Sprague-Dawley rats (250-270 g)[1]
Dosage:	5 mg dissolved in distilled water (0.5 mL)
Administration:	P.o. once daily for 2 weeks
Result:	Increased urethral baseline pressure (UBP) and leak-point pressure (LPP) significantly. Increased plasma epinephrine and norepinephrine levels. No significant changes were observed in body weight.

REFERENCES

[1]. Kitta T, et, al. Effects of propiverine hydrochloride, an anticholinergic agent, on urethral continence mechanisms and plasma catecholamine concentration in rats. Int Urogynecol J. 2013 Apr; 24(4): 683-8.

[2]. Ito Y, et, al. Muscarinic Receptor Binding and Plasma Drug Concentration after the Oral Administration of Propiverine in Mice. Low Urin Tract Symptoms. 2010 Apr; 2(1):43-9.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA