Trospium chloride

Cat. No.: HY-B0461

CAS No.: 10405-02-4

Molecular Formula: $C_{25}H_{30}ClNO_3$

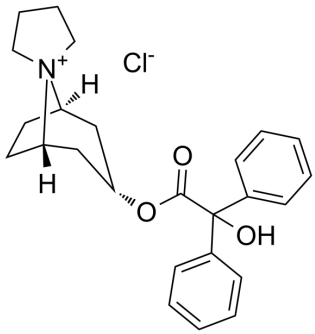
Molecular Weight: 427.96

Target: mAChR

Pathway: GPCR/G Protein; Neuronal Signaling

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

H_2O : ≥ 100 mg/mL (233.67 mM)

DMSO : 33.33 mg/mL (77.88 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.3367 mL	11.6833 mL	23.3667 mL
5 mM	0.4673 mL	2.3367 mL	4.6733 mL
10 mM	0.2337 mL	1.1683 mL	2.3367 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 (233.67 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 (5.84 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (5.84 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (5.84 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Trospium chloride is an orally active, specific and competitive antagonist of muscarinic cholinergic receptors (mAChRs), with antimuscarinic activity. Trospium chloride binds to muscarinic receptors M1, M2 and M3 with high affinity, but not nicotinic, cholinergic receptors[1][2].

IC_{50} & Target

mAChRs[1][2]

REFERENCES

[1]. David RP Guay. Trospium chloride: an update on a quaternary anticholinergic for treatment of urge urinary incontinence. Ther Clin Risk Manag. 2005 Jun; 1(2): 157–167.

[2]. Eric S Rovner, et al. Trospium chloride in the management of overactive bladder. Drugs. 2004;64(21):2433-46.

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