Cimetropium Bromide

Cat. No.: HY-U00106

CAS No.: 51598-60-8

Molecular Formula: $C_{21}H_{28}BrNO_4$

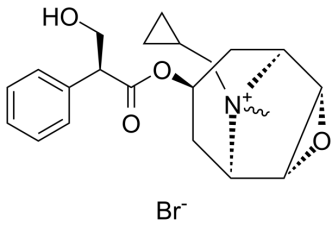
Molecular Weight: 438.36

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 : 50 mg/mL (114.06 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.2812 mL	11.4062 mL	22.8123 mL
	5 mM	0.4562 mL	2.2812 mL	4.5625 mL
	10 mM	0.2281 mL	1.1406 mL	2.2812 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 (228.12 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

Cimetropium Bromide (DA-3177) is a mAChR antagonist for long-term treatment of irritable bowel syndrome.

IC_{50} & Target

mAChR[1]

In Vitro

Cimetropium Bromide behaves as a competitive antagonist of muscarinic-mediated contractions in isolated colonic preparations from both species, with affinity values (pA2) ranging between 7.41 and 7.82[1]. Cimetropium has potent antimuscarinic effect in inhibition of contraction of longitudinal muscle preparations. In the superfusion experiments of the preparation which has been preloaded with labelled choline, Cimetropium decreases the labelled ACh release induced by electrical field stimulation under the muscarinic autoinhibition blocked-condition[2].

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

In Vivo

When administered intravenously to conscious dogs provided with a colonic Thiry fistula, Cimetropium is a potent inhibitor of large bowel motility evoked by both exogenous and endogenous stimuli. Cimetropium Bromide (10-100 μg/kg) counteracts colonic motor response to neostigmine administration with an ID_{50} of 27.9 μg/kg; both tonic and phasic

components of contractile response are affected. In a comparable range of doses (3-100μg/kg), the drug inhibits motor activity elicited by intraluminal distension[1].

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

REFERENCES

[1]. Identification of orally administered cimetropium bromide in the colon of the rat and its possible local spasmolytic effect.

[2]. Saitoh N, et al. Characterization of antimuscarinic effect of cimetropium bromide in guinea pig ileum. J Smooth Muscle Res. 1997 Feb;33(1):1-9.

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