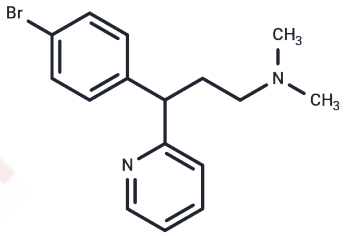
Data Sheet (Cat.No.T60843)

TargetMol

Brompheniramine

Chemical Properties



CAS No. : 86-22-6

Formula: C16H19BrN2

Molecular Weight: 319.24

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Brompheniramine ((±)-Brompheniramine) is a potent, orally active alkylamine class antihistamine and a selective antagonist of the histamine H1 receptor (Kd = 6.06 nM). It has applications in the research of allergic rhinitis and exhibits anticholinergic, antidepressant, and anesthetic properties. Brompheniramine blocks calcium channels, sodium channels, and hERG channels with IC50 values of 16.12 μM, 21.26 μM, and 0.90 μM, respectively [1] [2] [3] [4].
Targets(IC50)	Others,Calcium Channel,AChR,Histamine Receptor,Potassium Channel,Sodium Channel
In vitro	Brompheniramine, at concentrations ranging from 0.1-100 μM, inhibits hERG K+ channels in CHO cells in a concentration-dependent manner, with an IC50 value of 0.90 ±0.14 μM. This effect is observed through the reduction of peak tail current amplitude at -60 mV, following a depolarization-repolarization protocol [3]. Additionally, brompheniramine at 1, 10, and 100 μM concentrations significantly shortens the APD50 and depresses the plateau phase of the action potential in guinea pig papillary muscle, while at 10 and 100 μM, it slightly prolongs the APD90 [3]. Furthermore, brompheniramine reduces the amplitude of Ca2+ channel currents in rat ventricular myocytes by 14.1±1.1%, 31.1±5.8%, 38.0±3.8%, and 90.2±3.7% at 0.1, 1, 10, and 100 μM, respectively [3]. The compound also blocks muscarinic cholinergic receptors in human CHO cells [4].
In vivo	Brompheniramine (0.3-3 μM; SC, single dosage) elicits dose-dependent cutaneous analgesia in male Sprague-Dawley rats [1]. Administered via a single subcutaneous injection in doses ranging from 0.3 to 3.0 μM, it resulted in cutaneous analgesia with an effective concentration (EC 50) of 0.66 μM, alongside an extended duration of analgesia.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.1324 mL	15.6622 mL	31.3244 mL
5 mM	0.6265 mL	3.1324 mL	6.2649 mL
10 mM	0.3132 mL	1.5662 mL	3.1324 mL
50 mM	0.0626 mL	0.3132 mL	0.6265 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.