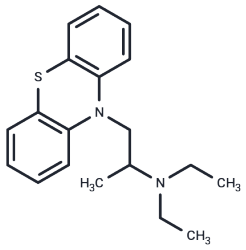
Data Sheet (Cat.No.T21393)

TargetMol

Ethopropazine Hydrochloride

Chemical Properties



CAS No. : 1094-08-2

Formula: C19H25ClN2S

Molecular Weight: 348.93

Storage: Keep away from moisture,Keep away from direct sunlight
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	Ethopropazine Hydrochloride is the salt form of Ethopropazine (Profenamine), a phenothiazine derivative with anticholinergic, antihistamine, and anti-adrenergic effects used in the treatment of Parkinson's disease, and acts as an AChE inhibitor by affecting the PAS active site.
Targets(IC50)	AChR,Cholinesterase (ChE),iGluR
In vitro	Ellman's method was used to assess the inhibitory activity of Ethopropazine Hydrochloride on cholinesterases, with human recombinant acetylcholinesterase (hAChE) and human plasma butyrylcholinesterase (hBChE) as target enzymes, and acetylthiocholine chloride (ATChCl) as the substrate. In a 96-well plate, enzyme solution, the chromogenic reagent DTNB, and different concentrations of Ethopropazine Hydrochloride (10 mM to 1 nM) were added sequentially. The reaction was initiated by adding 1 mM ATChCl, followed by incubation at 37°C for 5 minutes. Absorbance changes were measured at 412 nm. The **Results** showed that Ethopropazine Hydrochloride strongly inhibited hBChE (IC_{50} = 1.6 μM), while its inhibitory effect on hAChE was weaker (IC_{50} = 1020 μM), making it a highly efficient and selective BChE inhibitor [1].

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble),Sonication is recommended. DMSO: 20 mg/mL (57.32 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.73 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.8659 mL	14.3295 mL	28.659 mL
5 mM	0.5732 mL	2.8659 mL	5.7318 mL
10 mM	0.2866 mL	1.433 mL	2.8659 mL
50 mM	0.0573 mL	0.2866 mL	0.5732 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.

Reference

Komloova M,et al.Preparation, in vitro screening and molecular modelling of symmetrical bis-quinolinium cholinesterase inhibitors--implications for early myasthenia gravis treatment.Bioorg Med Chem Lett.2011 Apr 15; 21(8):2505-9.
Masti SP, Seetharamappa J, Melwanki MB. Extractive spectrophotometric determination of tungsten(VI) in alloy steels using ethopropazine hydrochloride. Anal Sci. 2002 Aug;18(8):913-5. PubMed PMID: 12200839.
Tvarijonaviciute A, Ceron JJ, Tecles F. Acetylcholinesterase and butyrylcholinesterase activities in obese Beagle dogs before and after weight loss. Vet Clin Pathol. 2013 Jun;42(2):207-11. doi: 10.1111/vcp.12032. Epub 2013 Apr 1. PubMed PMID: 23550593.
Bahar FG, Imai T. Aspirin hydrolysis in human and experimental animal plasma and the effect of metal cations on hydrolase activities. Drug Metab Dispos. 2013 Jul;41(7):1450-6. doi: 10.1124/dmd.113.051805. Epub 2013 May 6. PubMed PMID: 23649702.