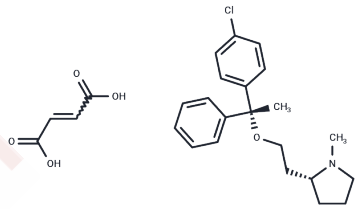
Data Sheet (Cat.No.T0147)

TargetMol

Clemastine fumarate

Chemical Properties



CAS No. : 14976-57-9

Formula: C25H30ClNO5

Molecular Weight: 459.97

Storage: Keep away from direct sunlight,Keep away from moisture,Store at low temperature
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	Clemastine fumarate (Meclastine (fumarate)) is a synthetic ethanolamine with anticholinergic, sedative, and histamine H1 antagonistic properties.
Targets(IC50)	Autophagy,Histamine Receptor
In vitro	In rats, Clemastine Fumarate (5-20 mg/kg) significantly inhibits yeast polysaccharide-induced paw edema and croton oil-induced ear swelling in a dose-dependent manner.
In vivo	In HL-60 cells, Clemastine Fumarate (IC50=3 nM) effectively inhibits histamine-induced increases in Ca2+ levels. In the human leukemia cell line K562 and the human B-lymphoblast cell line SB, concentrations of Clemastine Fumarate ≥25 μM significantly suppress both natural killer (NK) cell and antibody-dependent cell-mediated cytotoxicity (ADCC) activities. Additionally, Clemastine Fumarate potently inhibits the HERG K+ channel in HEK 293 cells stably expressing the channel (IC50=12 nM).

Solubility Information

Solubility	DMSO: 9 mg/mL (19.57 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: 1 mg/mL (2.17 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	2.1741 mL	10.8703 mL	21.7405 mL
5 mM	0.4348 mL	2.1741 mL	4.3481 mL
10 mM	0.2174 mL	1.087 mL	2.1741 mL
50 mM	0.0435 mL	0.2174 mL	0.4348 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

Seifert R, et al. Mol Pharmacol, 1992, 42(2), 227-234.
Nair MP, et al. Cell Immunol, 1983, 81(1), 45-60.
Merlos M, et al. J Pharmacol Exp Ther, 1997, 280(1), 114-121.
Ridley JM, et al. J Mol Cell Cardiol, 2006, 40(1), 107-118.
Nörenberg W, et al. J Biol Chem, 2011, 286(13), 11067-11081.
Xie D, Niu L, Gao C, et al. Clemastine Improves Hypomyelination in Rats with Hypoxic-Ischemic Brain Injury by Reducing Astroglia-Derived IL-1β via Autophagy[J]. 2020.