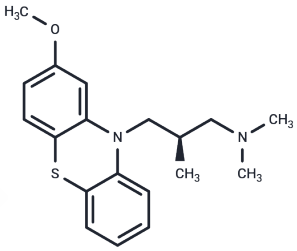
Data Sheet (Cat.No.T15743)

TargetMol

Levomepromazine

Chemical Properties



CAS No. : 60-99-1

Formula: C19H24N2OS

Molecular Weight: 328.47

Storage: 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	Levomepromazine (Methotrimeprazine) is an orally active aliphatic phenothiazine antipsychotic compound and a Ca2+ release inducer, exhibiting antiviral, anti-inflammatory, neuroprotective, analgesic, and anti-nociceptive activities. Levomepromazine inhibits dopaminergic, cholinergic, serotoninergic, and histaminergic receptors, and is used for research in neurodegenerative diseases.
Targets(IC50)	Calcium Channel,5-HT Receptor,Autophagy,Antifungal,Histamine Receptor,Dopamine Receptor,Virus Protease
In vitro	Levomepromazine(0.01-200 μM,72h) increased the CYP3A4 activity of HU1832 to 152% at 2.5 μM. [1] Levomepromazine (10 μM, 24 h) reduced Japanese encephalitis virus (JEV) -induced Neuro2a cell death, decreased JEV RNA levels and viral titers, and significantly inhibited JEV protein translation/replication complex formation and ROS production. Levomepromazine (10 μM, 24 h) reduces inflammation in microglia by inducing autophagy. [2]
In vivo	Levomepromazine (5-20 mg/kg; Intraperitoneal injection) has analgesic, sedative and anti-injurious effects in mice [4].

Solubility Information

Solubility	DMSO: 30 mg/mL (91.33 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 (3.04 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	3.0444 mL	15.2221 mL	30.4442 mL
5 mM	0.6089 mL	3.0444 mL	6.0888 mL
10 mM	0.3044 mL	1.5222 mL	3.0444 mL
50 mM	0.0609 mL	0.3044 mL	0.6089 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

Danek PJ, et al. Levomepromazine and clozapine induce the main human cytochrome P450 drug metabolizing enzyme CYP3A4. Pharmacol Rep. 2021 Feb;73(1):303-308.
Prajapat SK, et al. Methotrimeprazine is a neuroprotective antiviral in JEV infection via adaptive ER stress and autophagy. EMBO Mol Med. 2024 Jan;16(1):185-217.
Hals PA, Dahl SG. Pharmacokinetics and first-pass metabolism of levomepromazine in the rat. Acta Pharmacol Toxicol (Copenh). 1982 Feb;50(2):148-54.
Petts HV, Pleuvry BJ. Interactions of morphine and methotrimeprazine in mouse and man with respect to analgesia, respiration and sedation. Br J Anaesth. 1983 May;55(5):437-41.