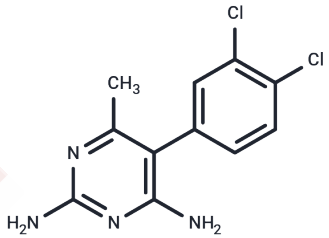
Data Sheet (Cat.No.T8548)

TargetMol

Metoprine

Chemical Properties



CAS No. :	7761-45-7
Formula:	C11H10Cl2N4
Molecular Weight:	269.13
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	Metoprine is a potent inhibitor of histamine N-methyltransferase (HMT), with potential antineoplastic activity.
Targets(IC50)	Histone Methyltransferase,Antifolate,Histamine Receptor
In vivo	In mammals, histamine N-methyltransferase (HMT) is the sole enzyme responsible for degrading histamine in the brain.?Metoprine, one of the most potent HMT inhibitors, can cross the blood-brain barrier and increase brain histamine levels by inhibiting HMT.? Consequently, this compound can be a candidate for a prototype of drugs for the treatment of METH overdose[1].

Solubility Information

Solubility	DMSO: 30.6 mg/mL (113.7 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 (3.72 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	3.7157 mL	18.5784 mL	37.1568 mL
5 mM	0.7431 mL	3.7157 mL	7.4314 mL
10 mM	0.3716 mL	1.8578 mL	3.7157 mL
50 mM	0.0743 mL	0.3716 mL	0.7431 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

Junichi Kitanaka, et al. Brain Histamine N-Methyltransferase As a Possible Target of Treatment for Methamphetamine Overdose. Drug Target Insights. 2016 Mar 2;10:1-7.
Naganuma F, Girgin B, Agu A B S, et al.Pharmacological inhibition of histamine N-methyltransferase extends wakefulness and suppresses cataplexy in a mouse model of narcolepsy.Sleep.2024: zsae244.
Samotaeva I S , Birioukova L M , Midzyanovskaya I S , et al. Metoprine induced behavioral modifications and brain regional histamine increase in WAG/Rij and Wistar rats[J]. Epilepsy Research, 2012, 101(1-2):148-156.