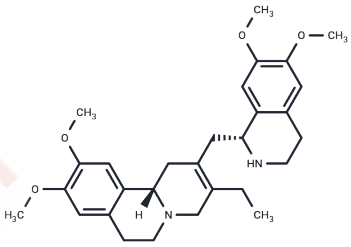
Data Sheet (Cat.No.T15095)

TargetMol

Dehydroemetine

Chemical Properties



CAS No. : 4914-30-1

Formula: C29H38N2O4

Molecular Weight: 478.62

Storage: 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	Dehydroemetine is an effective antigenic insecticide, which is a synthetic analogue of Emetine dihydrochloride. It can be used to prevent and treat amoeba infections and diseases. It has the effect of treating leishmania infection with skin damage and resistance to metronidazole amoebiosis.
Targets(IC50)	Parasite
In vivo	The mechanism of the inhibitory effect of Dehydroemetine on the heart was investigated using (a) the spontaneously contracting isolated guinea-pig atrial preparation and (b), the electrically driven left atrial preparation. Dehydroemetine decreased the rate and amplitude of contraction of spontaneously contracting atria. Increasing the calcium concentration of the bath fluid to 28.2 mM abolished the effect of Dehydroemetine on the amplitude of contraction while the effect on the rate persisted. Pretreatment with Dehydroemetine increased the capacity of ouabain to induce arrhythmias in spontaneously contracting atria. Similarly, pretreatment with ouabain augmented the inhibitory effect of Dehydroemetine on spontaneous atrial activity. In the electrically driven left atrial preparation, Dehydroemetine caused a decrease in contractile strength which was opposed by ouabain and by increased calcium concentration of the bath fluid. The effect of Dehydroemetine on spontaneously contracting and on electrically driven atria was mimicked by adding excess potassium to the bath fluid. It was concluded that the effects of Dehydroemetine on rate and contractility are, to a large extent, independent of one another. The effect on spontaneous rate is consistent with alteration of the potassium permeability of the myocardial cell membrane while the effect on contractility appears to be due to a decrease in the uptake of calcium from the medium by the myocardial cell.[1]

Solubility Information

Solubility	DMSO: 25 mg/mL (52.23 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 (4.18 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one.*

In vivo Formulation	*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	2.0893 mL	10.4467 mL	20.8934 mL
5 mM	0.4179 mL	2.0893 mL	4.1787 mL
10 mM	0.2089 mL	1.0447 mL	2.0893 mL
50 mM	0.0418 mL	0.2089 mL	0.4179 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

Salako LA. The actions of dehydroemetine on isolated guinea-pig atria. Influence of ouabain and calcium. Br J Pharmacol. 1972;46(4):725-735.

Durotoye AO, et al. The effect of dehydroemetine on isolated guinea-pig atria. Br J Pharmacol. 1972;44(4):723-731.

Fouarge M, et al. Development of dehydroemetine nanoparticles for the treatment of visceral leishmaniasis.J Microencapsul. 1989;6(1):29-34.

Panwar P, et al. Lead Optimization of Dehydroemetine for Repositioned Use in Malaria. Antimicrob Agents Chemother. 2020;64(4):1444-1449.

Scragg JN, Powell SJ. Metronidazole and niridazole combined with dehydroemetine in treatment of children with amoebic liver abscess. Arch Dis Child. 1970;45(240):193-195.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481