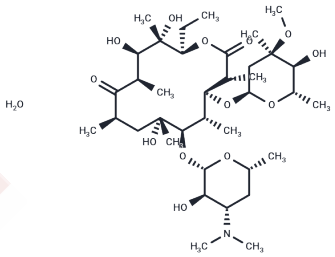
Data Sheet (Cat.No.T40676)

TargetMol

Erythromycin A dihydrate

Chemical Properties



CAS No. : 59319-72-1

Formula: C37H69NO14

Molecular Weight: 751.94

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	Erythromycin dihyrate dihydrate is a macrolide antibiotic produced by actinomycete Streptomyces erythreus with a broad spectrum of antimicrobial activity. Erythromycin dihyrate acts by binding to bacterial 50S ribosomal subunits and inhibits RNA-dependent protein synthesis by blockage of transpeptidation and/or translocation reactions, without affecting synthesis of nucleic acid.
Targets(IC50)	Others,Antibacterial,Antibiotic,DNA/RNA Synthesis
In vitro	Erythromycin dihyrate inhibits growth of P. falciparum with IC 50 and IC 90 values of 58.2 μM and 104.0 μM, respectively[1].
In vivo	Mice of the ddY strain began to receive Erythromycin dihyrate 7 days after inoculation of EAC cells, and CDF mice begins to receive Erythromycin dihyrate immediately after inoculation of P388 cells[3]. Erythromycin dihyrate (gastric intubation; 0.1-50 mg/kg; 30-120 days) decreases tumor growth from the dose of 5 mg/kg, mice receiving 1-10 mg/kg of Erythromycin dihyrate survives much longer than control mice, Only 10% of mice treated with 5 mg/kg of Erythromycin dihyrate had no evidence of tumor formation on day 60, and the mice are alive even at 120 days after inoculation. However, treatment with 50 mg/kg of Erythromycin dihyrate shortens mean survival time in tumorbearing mice by 4-5 days when it compares to controls[3]. Animal Model: Female ddY mice at the age of 6 weeks with EAC cells or CDF mice at the age of 6 weeks with P388 cells[3]Dosage: 0.1 mg/kg; 0.5 mg/kg; 10 mg/kg; 30 mg/kg; 50 mg/kg Administration: Gastric intubation; 30-120 days Result: Decreased tumor growth and prolonged the mean survival time of mice from the dose of 5 mg/kg, however, the 50 mg/kg dosage shortens the MST in tumorbearing mice.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.3299 mL	6.6495 mL	13.2989 mL
5 mM	0.266 mL	1.3299 mL	2.6598 mL
10 mM	0.133 mL	0.6649 mL	1.3299 mL
50 mM	0.0266 mL	0.133 mL	0.266 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

Gribble MJ, et al. Erythromycin. Med Clin North Am. 1982 Jan;66(1):79-89.
Nakornchai S, et al. Activity of azithromycin or erythromycin in combination with antimalarial drugs against multidrug-resistant Plasmodium falciparum in vitro. Acta Trop. 2006 Dec;100(3):185-91. Epub 2006 Nov 28.
K Hamada, et al. Antitumor Effect of Erythromycin in Mice. Chemotherapy