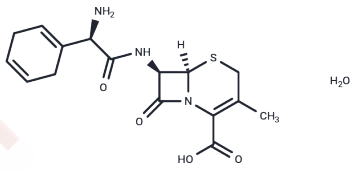
Data Sheet (Cat.No.T14929)

TargetMol

Cephradine monohydrate

Chemical Properties



CAS No. : 75975-70-1

Formula: C16H21N3O5S

Molecular Weight: 367.42

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	Cephradine monohydrate is an orally administered β-lactam cephalosporin antibiotic exhibiting broad-spectrum activity against Gram-positive and Gram-negative pathogens. It is indicated for infections of the respiratory tract, urinary tract, skin, and other sites. Cephradine also inhibits TOPK and blocks ultraviolet-induced skin inflammation.
Targets(IC50)	Antibacterial,Antibiotic,TOPK
In vitro	In HaCat and JB6 cells, Cephradine monohydrate (0.5, 1, and 2 mM, 2, 4, 6, and 12 hours) inhibited SUV-induced phosphorylation of p38, JNKs, and H2AX in a dose- and time-dependent manner, and suppressed the secretion of IL6 and TNF-α. [2]
In vivo	**Methods**: The dorsal skin of adult Babl/c mice was topically applied with Cephradine monohydrate (100 mg/kg), followed by SUV (100 KJ/m^2) irradiation to investigate the effect of Cephradine monohydrate on SUV-induced skin inflammation in mice. **Results**: Cephradine monohydrate treatment significantly reduced the increase in epidermal thickness and immune cell infiltration in mouse skin after SUV (100 KJ/m^2) irradiation. It also effectively inhibited the phosphorylation of p38, JNKs, and H2AX, as well as the secretion of IL-6 and TNF-α.[2]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7217 mL	13.6084 mL	27.2168 mL
5 mM	0.5443 mL	2.7217 mL	5.4434 mL
10 mM	0.2722 mL	1.3608 mL	2.7217 mL
50 mM	0.0544 mL	0.2722 mL	0.5443 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

Arayne MS, et al. Cephradine antacids interaction studies. Pak J Pharm Sci. 2007 Jul;20(3):179-84.
Fan X, et al. Cefradine blocks solar-ultraviolet induced skin inflammation through direct inhibition of T-LAK cell-originated protein kinase. Oncotarget. 2016;7(17):24633-24645.
Kang S, et al. In Vitro and In Vivo Antimicrobial Activity of Antibiotic-Conjugated Carriers with Rapid pH-Responsive Release Kinetics. Adv Healthc Mater. 2019;8(14):e1900247.
Schwinghammer TL, et al. Pharmacokinetics of cephradine administered intravenously and orally to young and elderly subjects. J Clin Pharmacol. 1990;30(10):893-899