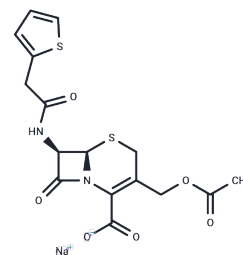


Cephalothin sodium

Chemical Properties

CAS No. :	58-71-9
Formula:	C ₁₆ H ₁₅ N ₂ NaO ₆ S ₂
Molecular Weight:	418.4
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	Cephalothin sodium (Cefalotin) binds to and inactivates penicillin-binding proteins (PBP) located on the inner membrane of the bacterial cell wall. Cephalothin sodium (Cefalotin) is the sodium salt form of cephalothin, a semisynthetic, beta-lactam, the first-generation cephalosporin antibiotic with bactericidal activity. PBPs participate in the terminal stages of assembling the bacterial cell wall, and in reshaping the cell wall during cell division. Inactivation of PBPs interferes with the cross-linkage of peptidoglycan chains necessary for bacterial cell wall strength and rigidity. This results in the weakening of the bacterial cell wall and causes cell lysis.
Targets(IC50)	Antibacterial, Antibiotic

Solubility Information

Solubility	H ₂ O: 119.5 mM, Sonication is recommended. DMSO: 51 mg/mL (121.89 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 (4.78 mM), Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3901 mL	11.9503 mL	23.9006 mL
5 mM	0.478 mL	2.3901 mL	4.7801 mL
10 mM	0.239 mL	1.195 mL	2.3901 mL
50 mM	0.0478 mL	0.239 mL	0.478 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

Williamson R, et al. Antimicrob Agents ChemOthers. 1980 Oct;18(4):629-37.

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