

Cefpiramide sodium

Chemical Properties

CAS No. :	74849-93-7
Formula:	C ₂₅ H ₂₄ N ₈ NaO ₇ S ₂
Molecular Weight:	635.63
Storage:	Powder: -20°C for 3 years Actual storage temperature shall be subject to the COA.

Biological Description

Description	Cefpiramide sodium (SM-1652; Wy-44635) is a Pseudomonas-active cephalosporin with a broad spectrum of antibacterial activity.
Targets(IC50)	Others,Antibacterial,Antibiotic
In vitro	Cefpiramide was moderately susceptible to hydrolysis by a variety of beta-lactamases from Gram-negative bacilli. Cefpiramide inhibited non-enterococcal streptococci, methicillin-susceptible staphylococci, Neisseria gonorrhoeae, N. meningitidis, and beta-lactamase-negative Haemophilus influenzae [1].
In vivo	Cefpiramide inhibited staphylococci and streptococci and had appreciable activity against Streptococcus faecalis and Listeria monocytogenes [3]. Pharmacokinetic studies in mice showed that cefpiramide attained a peak serum concentration of 12 micrograms/ml and a serum half-life of 40 min, which are higher than attained by cefoperazone with values of 4 micrograms/ml and 18 min. These factors may have caused the combined cefpiramide-gentamicin therapy to result in significantly improved survival rates in mice as well as in higher bactericidal titers than the cefoperazone-gentamicin combination [2].

Solubility Information

Solubility	DMSO: 39 mg/mL (61.36 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 (3.15 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	1.5732 mL	7.8662 mL	15.7324 mL
5 mM	0.3146 mL	1.5732 mL	3.1465 mL
10 mM	0.1573 mL	0.7866 mL	1.5732 mL
50 mM	0.0315 mL	0.1573 mL	0.3146 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

Barry AL, et al. Cefpiramide: comparative in-vitro activity and beta-lactamase stability. *J Antimicrob Chemother.* 1985 Sep;16(3):315-25.

Fu KP, et al. Therapeutic efficacy of cefpiramide and cefoperazone alone and in combination with gentamicin against pseudomonal infections in neutropenic mice. *Chemotherapy.* 1986;32(2):166-72.

Neu HC, et al. The in vitro activity and beta-lactamase stability of cefpiramide compared with other beta-lactam antibiotics. *Diagn Microbiol Infect Dis.* 1985 Nov;3(6):479-88.

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