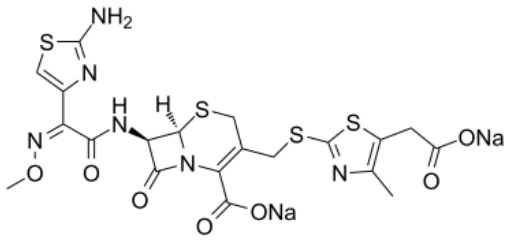
Product Data Sheet

Product Name: Cefodizime sodium
Cat. No.: GC60104

Chemical Properties

Cas. No.	86329-79-5		
SMILES	O=C(C(N12)=C(CSC3=NC(C)=C(CC(O[Na])=O)S3)CS[C@]2([H])[C@H](NC(/C(C4=CSC(N)=N4)=N\OC)=O)C1=O)O[Na]		
Formula	$C_{20}H_{18}N_6Na_2O_7S_4$	M.Wt	628.63
Solubility	DMSO: 62.5 mg/mL (99.42 mM)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure			



Background

Cefodizime sodium is a third generation cephalosporin antibiotic with a broad spectrum of antibacterial activity. Cefodizime sodium has no renal toxic effect, good tolerance and immune regulation activity, and has the potential for severe infections of the respiratory and urinary tracts[1] [2].

Caution: Product has not been fully validated for medical applications. For research use only.
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Enterobacteriaceae including Escherichia coli, Klebsiella pneumoniae, Morganella morgan ii, Proteus mirabilis, Proteus vulgaris, Shigella sonnei, Yersinia enterocolitica and Salmonella species are all consistently sensitive to Cefodizime in vitro. Cefodizime has marginal but variable inhibitory activity against Citrobacter species including Citrobacter freundii, and Serratia marcescens. Cefodizime inhibits other Gram-negative bacteria including Haemophilus irifluenzae, Moraxella catarrhalis, Neisseria gonorrhoeae and Neisseria meningitidis[1]. Cefodizime is a bactericidal antibiotic having high affinity for penicillin-binding proteins IA/B, 2 and 3 of E. coli. The in vitro concentrations of Cefodizime resulting in bactericidal activity against susceptible strains of Gram-positive and Gram-negative bacteria are generally similar to the minimum inhibitory concentrations[1].

In experimentally-induced K. pneumoniae respiratory tract infections in mice, Cefodizime has activity comparable to Cefotaxime and Ceftazidime, and greater than that of Cefoperazone, Latamoxef, Cefuroxime or cefazolin for 8 hours after a single subcutaneous dose of 50 mg/kg. However, unlike these cephalosporins, Cefodizime continues to demonstrate pronounced bactericidal activity for at least 48 hours after a single injection. Complete bacterial clearance from the lung is achieved within 48 hours in 50% of the mice although Cefodizime is no longer detectable in the serum[1].

[1]. Barradell LB, et al. Cefodizime. A review of its antibacterial activity, pharmacokinetic properties and therapeutic use. Drugs. 1992 Nov;44(5):800-34. [2]. Hu T, et al. Probing the interaction of cefodizime with human serum albumin using multi-spectroscopic and molecular docking techniques. J Pharm Biomed Anal. 2015 Mar 25;107:325-32.

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