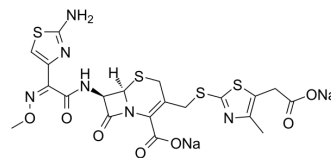


Cefodizime sodium

Cat. No.:	HY-108402A
CAS No.:	86329-79-5
Molecular Formula:	C ₂₀ H ₁₈ N ₆ Na ₂ O ₇ S ₄
Molecular Weight:	628.63
Target:	Bacterial; Antibiotic
Pathway:	Anti-infection
Storage:	4°C, sealed storage, away from moisture * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro	H ₂ O : 100 mg/mL (159.08 mM; Need ultrasonic)																									
	DMSO : 62.5 mg/mL (99.42 mM; Need ultrasonic)																									
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent</th> <th rowspan="2">Mass</th> <th colspan="3">Concentration</th> </tr> <tr> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td rowspan="4">Preparing Stock Solutions</td> <td>1 mM</td> <td>1.5908 mL</td> <td>7.9538 mL</td> <td>15.9076 mL</td> </tr> <tr> <td>5 mM</td> <td>0.3182 mL</td> <td>1.5908 mL</td> <td>3.1815 mL</td> </tr> <tr> <td>10 mM</td> <td>0.1591 mL</td> <td>0.7954 mL</td> <td>1.5908 mL</td> </tr> <tr> <td colspan="4">Please refer to the solubility information to select the appropriate solvent.</td> </tr> </tbody> </table>	Solvent	Mass	Concentration			1 mg	5 mg	10 mg	Preparing Stock Solutions	1 mM	1.5908 mL	7.9538 mL	15.9076 mL	5 mM	0.3182 mL	1.5908 mL	3.1815 mL	10 mM	0.1591 mL	0.7954 mL	1.5908 mL	Please refer to the solubility information to select the appropriate solvent.			
	Solvent			Mass	Concentration																					
		1 mg	5 mg		10 mg																					
Preparing Stock Solutions	1 mM	1.5908 mL	7.9538 mL	15.9076 mL																						
	5 mM	0.3182 mL	1.5908 mL	3.1815 mL																						
	10 mM	0.1591 mL	0.7954 mL	1.5908 mL																						
	Please refer to the solubility information to select the appropriate solvent.																									
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 2.08 mg/mL (3.31 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (3.31 mM); Clear solution 																									

BIOLOGICAL ACTIVITY

Description	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 can be used for the research of severe infections of the respiratory and urinary tracts ^{[1][2]} .
IC₅₀ & Target	Bacterial ^[1]
In Vitro	Enterobacteriaceae including <i>Escherichia coli</i> , <i>Klebsiella pneumoniae</i> , <i>Morganella morganii</i> , <i>Proteus mirabilis</i> , <i>Proteus vulgaris</i> , <i>Shigella sonnei</i> , <i>Yersinia enterocolitica</i> and <i>Salmonella</i> species are all consistently sensitive to Cefodizime in vitro. Cefodizime has marginal but variable inhibitory activity against <i>Citrobacter</i> species including <i>Citrobacter freundii</i> , and <i>Serratia marcescens</i> . Cefodizime inhibits other Gram-negative bacteria including <i>Haemophilus influenzae</i> , <i>Moraxella</i>

catarrhalis, Neisseria gonorrhoeae and Neisseria meningitidis^[1].

Cefodizime is a bactericidal antibiotic having high affinity for penicillin-binding proteins 1A/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].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

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].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[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.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA