



Cefathiamidine PRODUCT DATA SHEET

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Product Name:	Cefathiamidine
Product Number:	C237
CAS Number:	33075-00-2
Molecular Formula:	$C_{19}H_{28}N_4O_6S_2$
Molecular Weight:	472.58
Form:	Solid
Appearance:	White to off-white crystalline powder
Solubility:	DMSO (94 mg/ml)
Source:	Synthetic
Storage Conditions:	-20C (hygroscopic)
Description:	Cefathiamidine is a broad-spectrum first-generation cephalosporin β -lactam antibiotic. It is used for the treatment of respiratory and urinary tract infections, pneumonia, sepsis, and meningitis.
Mechanism of Action:	Like β -lactams, cephalosporins interfere with PBP (penicillin binding protein) activity involved in the final phase of peptidoglycan synthesis. PBP's are enzymes which catalyze a pentaglycine crosslink between alanine and lysine residues providing additional strength to the cell wall. Without a pentaglycine crosslink, the integrity of the cell wall is severely compromised and ultimately leads to cell lysis and death. Resistance to cephalosporins is commonly due to cells containing plasmid encoded β -lactamases.
Spectrum:	Gram-positive, Gram-negative
Microbiology Applications	Cefathiamidine has a similar antibacterial spectrum as Cefalotin.
References:	Tze-Ying T et al (1979) Clinical and laboratory studies of a new cephalosporin derivative – cefathiamidine. Chin. Med. J. 92(1): 26-36 PMID 105842

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