Product Name: Cefoxitin
Product Number: C091
CAS Number: 35607-66-0
Molecular Formula: \( \text{C}_{16}\text{H}_{17}\text{N}_{3}\text{O}_{7}\text{S}_{2} \)
Molecular Weight: 427.46 g/mol
Form: Powder
Appearance: white or almost white powder
Solubility: sparingly soluble in aqueous solution (0.195 mg/ml).
Source: Semi-synthetic
Water Content (Karl Fischer): ≤5.0%
\( \text{pH: } \) 2.5-3.5
Optical Rotation: +195° to +208°
Storage Conditions: -20°C
Description: Cefoxitin is a cephamycin β-lactam second-generation cephalosporin. Cefoxitin is resistant to β-lactamases. Cefoxitin is sparingly soluble in aqueous solution.
We also offer:
- Cefoxitin sodium (C054)

Mechanism of Action: Like β-lactams, cephamycins interfere with PBP (penicillin binding protein) activity involved in the final phase of peptidoglycan synthesis. PBPs 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 cephamycins is commonly due to cells containing plasmid encoded β-lactamases.

Spectrum: Cefoxitin is a broad-spectrum antibiotic effective against several Gram-positive and Gram-negative bacteria. Like many cephamycins, Cefoxitin is particularly effective against anaerobic bacteria.
Microbiology Applications  
Cefoxitin is commonly used in clinical *in vitro* microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against Gram-positive and Gram-negative microbial isolates. Medical microbiologists use AST results to recommend antibiotic treatment options for infected patients. Representative MIC values include:

- *Bacteroides fragilis* 1 µg/mL – 8 µg/mL
- *Bacillus cereus* 8.6 µg/mL
- For a complete list of Cefoxitin MIC values, click here.

Media Supplements

Cefoxitin can be used as a selective agent in several types of isolation media:

*Clostridium difficile agar* - Isolation of *Clostridium difficile*

References:


If you need any help, contact us: info@toku-e.com. Find more information on: www.toku-e.com/