Product Name: Cefozopran Hydrochloride

Product Number: C099

CAS Number: 113981-44-5

Molecular Formula: C_{19}H_{17}N_{9}O_{5}S_{2}\cdot\text{HCl}

Molecular Weight: 551.99

Form: Powder

Solubility: is freely soluble in DMSO and slightly soluble in water.

Storage Conditions: -20°C

Description: Cefozopran Hydrochloride is a broad-spectrum, fourth-generation cephalosporin that interferes with bacterial peptidoglycan synthesis. The compound is freely soluble in DMSO and slightly soluble in water.

Mechanism of Action: Similar to 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: Cefozopran is a broad-spectrum antibiotic targeting a wide range of Gram-positive and Gram-negative bacteria including Pseudomonas aeruginosa.

Microbiology Applications Cefozopran has been shown to be useful against the multi drug resistant MRSA when used in combination with other antibiotics including vancomycin and teicoplanin.

References:
