Product Name: Cefpodoxime Sodium

Product Number: C096

CAS Number: 82619-04-3

Molecular Formula: C_{15}H_{16}N_{5}NaO_{6}S_{2}

Molecular Weight: 449.44

Form: powder

Appearance: brown crystalline powder

Source: synthetic

Water Content (Karl Fischer): report results

Storage Conditions: -20°C. Protect from light.

Description: Cefpodoxime Sodium is a broad-spectrum, third-generation cephalosporin β-lactam antibiotic that interferes with bacterial cell wall. It is effective against a wide range of Gram-positive and Gram-negative bacteria. Cefpodoxime Sodium is soluble in DMSO.

We also offer:

- Cefpodoxime Proxetil (C015)
- Cefpodoxime Free Acid (C016)

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. However, like many cephalosporins, cefpodoxime is stable in the presence of β-lactamases.

Spectrum: Cefpodoxime Sodium is a broad-spectrum antibiotic which targets a wide variety of Gram-positive and Gram-negative bacteria especially those which cause otitis media and pharyngitis.
**Microbiology Applications** Cefpodoxime Sodium 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. Representative MIC values include:

- *Klebsiella pneumoniae* 8 µg/mL - 64 µg/mL
- *Haemophilus influenzae* 0.032 µg/mL – 1 µg/mL
- For a complete list of cefpodoxime MIC values, click here.

Cefpodoxime from TOKU-E was used as a reference compound when characterizing the extended-spectrum AmpC (ESAC) B-lactamase enzymes (Lahiri et al, 2014).

*In vitro* kinetic modeling can be used to study the pharmacokinetic-pharmacodynamic modelling of the antibacterial activity of cefpodoxime. This approach has more detailed information than the MIC about the time course of efficacy (Liu et al, 2005).

**References:**


Alm et al. used cefpodoxime from TOKU-E against *Escherichia coli* NDM isolates in microdilution MIC assays. "Characterization of Escherichia coli NDM isolates with decreased susceptibility to aztreonam/avibactam: role of a novel insertion in PBP3."

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