Cefoperazone sodium salt

Product Number  C 4292
Storage Temperature  2-8 °C

Product Description
Molecular Formula:  C_{25}H_{26}N_{9}O_{8}S_{2}Na
Molecular Weight:  667.7
CAS Number:  62893-20-3
Synonyms:  [6R-[6α,7β(R*)]]-7-[[((4-ethyl-2,3-dioxo-1-piperazinyl)carbonyl)amino]-(4-hydroxyphenyl)acyl]amino]-3-[[1-methyl-1H-tetrazol-5-yl]thio[methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid sodium salt; 7-[d-(−)-α-(4-ethyl-2,3-dioxo-1-piperazinecarboxamido)-α-(4-hydroxyphenyl)acetamido]-3-[[1-methyl-1H-tetrazol-5-yl]thio[methyl]-3-cephen-4-carboxylic acid sodium salt

Cefoperazone is a broad-spectrum third generation cephalosporin antibiotic which has similar antimicrobial activity to ceftazidime. Cefoperazone is notably active against *Pseudomonas aeruginosa*, and it has enhanced activity against Enterobacteriaceae and *Bacteroides* sp. in the presence of the β-lactamase inhibitor sulbactam. Compared to cefotaxime, cefoperazone has greater susceptibility to hydrolysis by some β-lactamases.\(^1\)^\(^,\)\(^2\)

Cefoperazone has been used in a study of P-glycoprotein expression in MCF-7 breast carcinoma cells at concentrations of 0.02 - 2 mg/ml.\(^3\) Cultures of various *Arcobacter* species in the presence of cefoperazone have been utilized for development of a multiplex PCR assay for identification of these bacteria in poultry samples.\(^4\) A campylobacter selective medium that includes cefoperazone as a component of the blood-free charcoal-based agar, for isolation of thermophilic campylobacter species, has been described.\(^5\)

An HPLC method for the analysis of cefoperazone and other cephalosporins in raw bovine milk has been reported.\(^6\) Cefoperazone has been utilized in the activity analysis of an immobilized TEM-1 β-lactamase on a Ni\(^{2+}\) chelating agarose fast flow column.\(^7\)

Precautions and Disclaimer
For Laboratory Use Only. Not for drug, household or other uses.

Preparation Instructions
This product is soluble in water (50 mg/ml), with heat as needed, yielding a clear, faint yellow solution.

Storage/Stability
Solutions of this product are stable at pH 4.0 -7.0, slightly unstable in acid, and highly unstable in alkaline solutions.\(^1\)

References