

Cefoperazone

A broad-spectrum antibiotic

A useful antibiotic with broad-spectrum cephalosporin properties in microbiology is cefoperazone powder. It is active against both Gram-positive and Gram-negative bacteria. Its efficacy against the antibiotic-resistant bacteria *Pseudomonas aeruginosa* is one of its main advantages.

Cefoperazone interferes with the formation of bacterial cell walls, just like other beta-lactam antibiotics. It does this by binding itself to certain penicillin-binding proteins (PBPs). These PBPs are crucial enzymes that bacteria use to build their cell walls. Cefoperazone effectively stops the last phase of cell wall production by inhibiting PBPs. As a result, the bacterial cell wall becomes susceptible to the activity of the bacteria's own autolysins, which break down the cell wall, finally resulting in cell death.

Cat. Number	AS-2005
CAS Number	62893-19-0
MDL Number	MFCD00865067
PubChem	310269489
Molecular Weight	645.67 g/mol
Molecular Formula	C ₂₅ H ₂₇ N ₉ O ₈ S ₂
Storage Temperature	4°C
Form and Color	Powder, white to pale yellow
Assay (on dry basis)	87.0 to 101.5%
pH	2 - 4
Water content	Max. 6%