Product Name: Ampicillin/Sulbactam (2:1)

Product Number: A071

CAS Number: 117060-71-6

Molecular Formula:
- Ampicillin: C₁₆H₁₉N₃O₄S
- Sulbactam: C₈H₁₁NO₅S

Molecular Weight: Mixture

Form: Powder

Appearance: White or almost white crystalline powder

Water Content (Karl Fischer): ≤2.0%

pH: 8.0-10.0

Description: Ampicillin/Sulbactam is a combination of a β-lactam similar in structure to penicillin, with a β-lactamase inhibitor used to increase potency of β-lactam antibiotics.

TOKU-E offers five forms of Ampicillin:

- Ampicillin/Sulbactam (2:1) (A071)
- Ampicillin Anhydrous (A043)
- Ampicillin Sodium (A042)
- Ampicillin Trihydrate, USP (A009)
- Ampicillin Trihydrate, EP (A020)

It is used for microbiological in vitro susceptibility tests, and studies in pharmacokinetics and pharmacodynamics.

Mechanism of Action: Like all β-lactams, Ampicillin interferes with PBP (penicillin binding protein) activity otherwise involved in the final phase of peptidoglycan synthesis. PBP’s are enzymes which catalyze a pentaglycine crosslink between alanine and lysine residues. Without a pentaglycine crosslink, the integrity of the cell wall is severely compromised ultimately leading to cell lysis.

Spectrum: Ampicillin targets Gram-negative non ESBL (Extended Spectrum β-lactamase) bacteria including *Staphylococcus* and *Streptococcus* and medically important enteric pathogens such as *Shigella* and *Salmonella*. Ampicillin has been found to be effective against certain β-lactam sensitive VRE or vancomycin resistant *Enterococcus*; a glycopeptide antibiotic resistant "superbug."
Microbiology Applications

Ampicillin/Sulbactam 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.

Media Supplements

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

* Aeromonas Medium Base * - Ampicillin Selective Supplement

References:


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