Ampicillin Sodium Salt

Catalog number

A2260

Supplier

United States Biological

Ampicillin Sodium Salt is a readily-soluble form of ampicillin. It belongs to the group of beta-lactam antibiotics. These antibotics gram-negative bacteria to which E. coli and Salmonella belong. beta-lactam antibiotic prevent the formation of peptidoglycan, an essential building block of the cell membrane. Thus, preventing growth of cells. Used to select for drug-resistant, plasmid-bearing bacteria.

Synonyms

6-[D-(-)-alpha-Aminophenylacetamido]-penicillanic acid, sodium salt; Sodium [2S-[2α,5α,6β (S*)]]-6-(aminophenylacetamido)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylate

CAS No

69-52-3

Molecular Formula

C16H18N3O4SNa

Molecular Weight

371.40

Appearance

White to off-white powder

Purity

≥98%

Potency

845-988ug/mg

Identification

To Pass USP

pH (1%)

8.0-10.0

Water

≤2%

Methylene Chloride

≤0.2%

Solubility (50mg/ml, H2O)

Very soluble in water, isotonic sodium chloride and dextrose solutions. Clear, colorless and complete. Insoluble in alcohol, chloroform, ether and fixed oils but soluble in dilute acids or bases. The solution should not be autoclaved; a stock solution should be sterilized through filtration and stored frozen, where it will be stable for months.

Antimicrobial Spectrum

Includes both gram-positive (similar to benzylpenicillin) and gram-negative bacteria (similar to tetracyclines and chloramphenicol.

Working Concentration

20-125ug/ml for E. coli in ampicillin-resistance studies
100mg/L for antibacterial use in cell culture media

Storage and Stablility

Lyophilized powder may be stored at 4°C. Stable for 12 months after receipt at 4°C. Reconstitute with sterile buffer or ddH2O. Aliquot and store at -20°C. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer.

Formulation

White to off-white powder

Purity

≥98%

Grade

Molecular Biology Grade

Storage

4°C/-20°C

MW

371.4

Formula

C16H18N3O4SNa

Reference

Dennis, A.M. et al., (2010) Bioconjugate Chem. 21; 1160-1170. 1. Ausubel, F. M., et al., Current Protocols in Molecular Biology, John Wiley (1992). 2. Maniatis, T., et al., Molecular Cloning: A Laboratory Manual, Cold Spring Harbor Laboratory Press (1989).