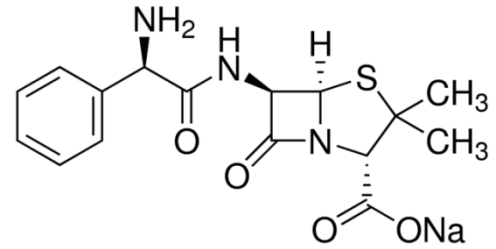




Ampicillin sodium salt solution

Synonym: D-(-)- α -Aminobenzylpenicillin sodium salt

CAS Number 69-52-3 Empirical Formula (Hill Notation) C₁₆H₁₈N₃NaO₄S Molecular Weight 371.39



Properties

mp	215 °C (dec.)(lit.)
solubility	H ₂ O: soluble 50 mg/mL
Featured Industry	Agriculture
antibiotic activity spectrum	Gram-negative bacteria
	Gram-positive bacteria
storage temp.	2-8°C

Description

Application

Used to select for ampicillin resistance in mutated and transformed cells.

Biochem/physiol Actions

Mode of Action: This is a β -lactam antibiotic that inhibits bacterial cell-wall synthesis by inactivating transpeptidases on the inner surface of the bacterial cell membrane.

Mode of Resistance: Administration with β -lactamase cleaves the β -lactam ring of Ampicillin and inactivates it.

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

Caution

This product has been reported stable as supplied at 25°C at 43% and 81% relative humidity for six weeks. Additional studies have shown that the stability of Ampicillin in solution is a function of pH, temperature and the identity of the buffer. It's activity is quickly lost when stored above pH 7. Optimal storage conditions are suggested as 2-8°C, and pH 3.8-5 where its activity was retained at 90%+ for a week.