Ampicillin (sodium salt)

#GAB03.0005

(for research only)

Product: Ampicillin is a bactericidal agent that acts by inhibition of transpeptidase, which is required for cell wall synthesis, and as such functions as a broad-spectrum antibiotic, effective against Gram(+) and Gram(-) bacteria. This semi-synthetic derivate from Penicillin , like Penicillin, can be inactivated by ß-lactamase, which hydrolyzes the ß-lactam ring. Therefore, ampicillin is frequently used for the selection of bacteria transformed with a vector harbouring the gene encoding ß-lactamase (*bla*), which turns them resistant, from untransformed cells.

Quantity: 5g

Appearance: White, slightly beige powder.

Storage: 2ºC – 8ºC for at least 1 years, at -20ºC at least 3 years

Preparation: Prepare a stock solution of 4-50mg/ml in ultrapure water or 50% ethanol, and filter sterilize. Do not autoclave. Store stock solution at +4ºC for several weeks or at -20ºC for up to 6 months.

Usage: The stability of ampicillin depends on temperature, pH and medium components. For incorporation in agar plates, add ampicillin to a final concentration of 20-100µg/ml (depending on, among other factors, type of vector (low-copy vs high-copy number plasmid) by adding to autoclaved media agar, just prior to pouring the plates, or to broth after cooling down to room temperature. At 37ºC, ampicillin in culture medium, is stable only for a few (2-3) days. In addition, buffer and pH can affect stability as well. Whereas Tris degrades ampicillin at pH 7 and not at pH 5, citrate, to the contrary, can be used at pH 7 and not at pH 5.

Specifications:

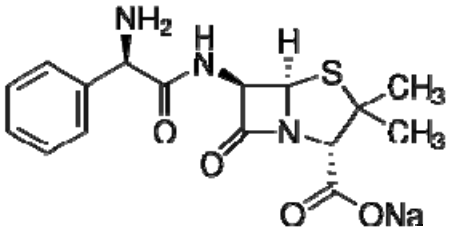
Formula: $C_{16}H_{18}N_3O_4SNa$

MW: 371,4 g/mol

Purity: >90% (on dry basis)

Water content: <2% (Karl Fischer)

Solubility (H_2O): 50mg/ml



ORDERING INFORMATION – Molecular Cloning – Common Reagents

Reference #	Product Name	Quantity
GAB01.0005	IPTG (max 5 ppm dioxane)	5 g
GAB02.0005	X-Gal	5 g
GAB03.0005	Ampicillin (sodium salt)	5 g
GAB04.0005	Kanamycin (sulphate)	5 g
GAB05.0005	Chloramphenicol	5 g
GAB06.0005	Carbenicillin (disodium salt)	5 g
GAB07.0005	Tetracycline (hydrochloride)	5 g
GAB08.0005	Gentamycin powder	5 g

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