



GeneSpin Srl Via Friuli, 51 -20135 Milano
P.IVA e C.F. 04520270960
administration@pec.genespin.com
info@genespin.com

DATA SHEET

> Ampicillin Sodium Salt

cat. no.	amount	note
STS-AMP5	5g	powder
STS-AMP25	25g	powder

Ampicillin is a beta-lactam antibiotic active against Gram-positive (e.g. Staphylococci and Streptococci) as well as some Gram-negative (e.g. coliforms) organisms. Ampicillin acts as a competitive inhibitor of the enzyme transpeptidase, which is needed by bacteria to make their cell walls. It inhibits the third and final stage of bacterial cell wall synthesis in binary fission, which ultimately leads to cell lysis.

Ampicillin is often used as a selective agent in molecular biology to select for and to confirm the uptake of genes (e.g., of plasmids) by bacteria (e.g., E. coli). A gene that is to be inserted into a bacterium is coupled to a gene coding for an Ampicillin resistance (in E. coli, usually the bla (TEM-1) gene, coding for β -lactamase). The treated bacteria are then grown in a medium containing Ampicillin (typically 100 mg/L). Only the bacteria that successfully take up the desired genes become Ampicillin resistant, and therefore contain the other desired gene as well.

Chemical Name

(2S,5R,6R)-6-([(2R)-2-amino-2-phenylacetyl]amino)-3,3-dimethyl-7-oxo-4-thia-1-azabicyclo[3.2.0]heptane-2-carboxylic acid

Formulation

$C_{16}H_{19}N_3O_4S$

Molecular Weight

349,41

Solubility

Soluble in water.

As a powder, Ampicillin is white with slight yellow cast and is soluble in water (up to 500 mg/ml).

Storage

Store dry at 2-5°C.

FOR RESEARCH USE ONLY