

Product Information

Ampicillin sodium salt, Ready Made Solution 100mg/ml

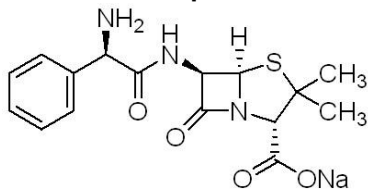
Catalog Number **A5354**

Storage Temperature $-20\text{ }^{\circ}\text{C}$

CAS RN 69-52-3

Synonym: D-(-)- α -aminobenzylpenicillin

Product Description



Molecular Formula: $\text{C}_{16}\text{H}_{18}\text{N}_3\text{NaO}_4\text{S}$

Molecular Weight: 371.39

Ampicillin is a β -lactam antibiotic with an amino group side chain attached to the penicillin structure. Ampicillin, which is a semi-synthetic derivative of penicillin, inhibits cell wall synthesis (peptidoglycan crosslinking) by inactivating transpeptidases on the inner surface of the bacterial cell membrane in Gram-negative and Gram-positive bacteria.^{2,3} Cleavage of the β -lactam ring of ampicillin by β -lactamase results in bacterial resistance to this antibiotic.^{2,4}

Ampicillin sodium salt, Ready Made Solution, 100mg/mL is a filtered solution of 100 mg/ml of ampicillin, which remains liquid at its storage temperature ($-20\text{ }^{\circ}\text{C}$)

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

The product ships on dry ice and storage at $-20\text{ }^{\circ}\text{C}$ is recommended.

Procedure

The product can be added to an agar or culture medium, which has been autoclaved and cooled to $45\text{--}50\text{ }^{\circ}\text{C}$. Culture plates with ampicillin can be stored at $2\text{--}8\text{ }^{\circ}\text{C}$ for up to two weeks.

The recommended concentration for antibacterial use in culture media is $\sim 100\text{ }\mu\text{g/ml}$ (a 1000-fold dilution of the product).

The recommended concentration for use in ampicillin resistance studies is $20\text{--}125\text{ }\mu\text{g/ml}$.⁴

References

1. Wright, A.J., The penicillins. Mayo Clin. Proc., **74**, 290-307 (1999).
2. Kirby, W.M., and Bulger, R.J., The new penicillins and cephalosporins. Annu. Rev. Med., **15**, 393-412 (1964).
3. Rolinson, G.N., Forty years of beta-lactam research. J. Antimicrob. Chemother., **41**, 589-603 (1998).
4. Perlman, D., et al., Use of antibiotics in cell culture. Meth. Enzymol., **58**, 110-116 (1979).

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