

# Ampicillin Solution

With 100mg/ml Ampicillin sodium salt in sterile tissue culture grade water

**Product Code: A023**

## Product Description:

Molecular Formula:  $C_{16}H_{18}N_3NaO_4S$

Molecular Weight: 371.4

CAS No: 69-52-3

Ampicillin D-(-)- $\alpha$ -Aminobenzylpenicillin sodium salt is a beta-lactam antibiotic with an amino group attached to the penicillin structure. Ampicillin is effective against Gram positive and some Gram negative bacteria. The presence of amino group helps the antibiotic to penetrate the outer membrane of the Gram negative bacteria. Ampicillin inhibits the enzyme transpeptidase which is required for cell wall synthesis. It binds to the penicillin binding proteins and acts as an analogue of acyl-D-alanyl-D-alanine, acylating the transpeptidase enzyme. Eventually inhibiting the cross-linking of peptidoglycan of the cell wall, the final stage of cell wall formation, and ultimately resulting in the lysis of the cell.

Ampicillin is used in cell culture as a selective agent. A023 is a sterile filtered solution formulated to contain 100mg ampicillin per ml.

## Directions:

Recommended use concentration is 100ml/L. Sensitive cell lines may react differently to this product. Hence it is recommended to determine optimum usage dose empirically for individual cell line.

## Quality Control:

### Appearance

Yellow suspension.

### pH

8.00 -11.00

## Osmolality in mOsm/Kg H<sub>2</sub>O

500.00 -600.00

## Sterility

No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

## Endotoxin Content

NMT 0.5EU/ml

## Ampicillin concentration

100 mg/ml.

## Antibiotic Sensitivity Test

Passes

## Cultural Response

1. No toxicity to cells.
2. Antibiotic Susceptibility Test

## Escherichia coli (as such)

zone of inhibition >20mm

## Escherichia coli (1ml/L)

zone of inhibition >15mm

## Staphylococcus aureus (as such)

zone of inhibition >20mm

## Staphylococcus aureus (1ml/L)

zone of inhibition >20mm

## Storage and Shelf Life:

Store at -30°C to -10°C.

Repeated freezing and thawing should be avoided.

Once thawed, remaining portion can be aseptically dispensed into sterile container for future use.

Shelf life of the product is 18 months.

Use before expiry date given on the product label.

## Disclaimer :

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