

Gentamicin Solution

With 50 mg/ml Gentamicin in sterile tissue culture grade water

Product Code: A005

Product Description :

Molecular Weight:

C1 - 477.6

C2 - 463.6

C1a - 449.5

Molecular Formula:

C1 - C₂₁H₄₃N₅O₇

C2 - C₂₀H₄₁N₅O₇

C1a - C₁₉H₃₉N₅O₇

CAS number: 1405-41-0

Gentamicin is a broad spectrum bacteriocidal agent of aminoglycoside group and is effective against gram positive bacteria and gram negative bacteria. It was originally purified from the fungus *Micromonospora purpurea*. It is a mixture of the three major components C1, C1a and C2. The ratio of the three components is as follows:

C1 - 25 - 50%

C2 - 25 - 55%

C1a - 10 - 35%

Gentamicin binds to four nucleotides of 16S rRNA and a single amino acid of protein S12. This interferes with decoding site in the vicinity of nucleotide 1400 in 16S rRNA of 30S subunit. This region interacts with the wobble base in the anticodon of tRNA. This leads to interference with the initiation complex, misreading of mRNA so incorrect amino acids are inserted into the polypeptide leading to nonfunctional or toxic peptides and the breakup of polysomes into nonfunctional monosomes. In cell culture, Gentamicin sulfate is used as an antibacterial agent to prevent contamination.

A005 is sterile filtered solution formulated to contain 50 mg/ml Gentamicin in tissue culture grade water.

Directions :

Recommended use concentration is 1ml/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

Colorless, clear solution.

pH

4.70 - 5.30

Osmolality in mOsm/Kg H₂O

80.00 - 120.00

Gentamicin concentration

50mg/ml

Sterility

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

Cultural Response

1. No toxicity to cells
2. Antibiotic sensitivity test

Endotoxin Content

NMT 0.5EU/ml

Storage and shelf Life:

Store at 2-8°C.

Shelf life of the Product is 24 months

Use before expiry date given on the product label.

Disclaimer :

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