

Neomycin sulphate salt

Cell Culture Tested

Product Code: TC031

Product Description:

Molecular Weight: 908.88

Molecular Formula: $C_{23}H_{46}N_6O_{13} \cdot 3H_2SO_4$

CAS No: 1405-10-3

Synonym: Framycetin, Neomycin B, Soframycin, Mycifradin

Neomycin sulfate salt is an aminoglycoside antibiotic obtained from *Streptomyces fradiae*. It is composed of three separate compounds - neomycin A, neomycin B (framycetin), and neomycin C. Neomycin irreversibly binds to specific 30S-subunit proteins and 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 type of interaction interferes with initiation complex, causes misreading of mRNA and incorrect insertion of amino acids into the polypeptide. These events lead to non-functional or toxic peptides and breakdown of polysomes into non-functional monosomes. It is a broad spectrum antibiotic active against Gram-positive and Gram-negative organisms. It also prevents growth of protozoa, algae, and mammalian cells.

In cell culture, Neomycin sulfate is used as an anti-microbial agent to prevent contamination.

Quality Control:

Appearance

White to yellow hygroscopic crystals or powder.

Solubility

100 mg soluble in 1 ml of water.

pH (1% in water at 25°C)

5.00 - 7.50

Specific rotation

(+) 53.50° to (+) 59.00° (C = 10% in water at 25°C)

FTIR

Matches with the standard pattern

Antibiotic Sensitivity

Passes

Potency

NLT 680 µg/mg

Cell Culture Test

Passes

Storage and Shelf Life:

Store below 30°C away from bright light.

Shelf life is 36 months.

Use before expiry date given on the product label.

Disclaimer :

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