



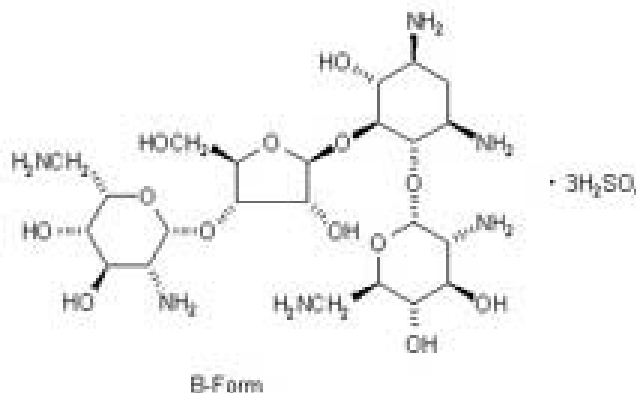
Product Information Sheet

N584 Neomycin Sulfate

Synonyms: N/A
CAS: 1405-10-3
Formula: $C_{23}H_{46}N_6O_{13} \cdot 3H_2SO_4$
Mol. Weight: 908.9

Properties

Form: Powder
Appearance: White to Cream Powder
Application: Plant Tissue Culture Antibiotic
Solubility: Soluble in Water
Storage Temp: 2 to 6 °C
Other: Average Activity: 600 µg/mL
This product is hygroscopic. Protect from light.



Application Notes

Neomycin sulfate is an aminoglycoside antibiotic derived from *Streptomyces* species. Its mode of action and activity are similar to that of gentamicin. Neomycin inhibits protein synthesis and elicits miscoding by binding to the 30S ribosome subunit and sometime 50S subunit.² It is most effective against Gram-positive and Gram-negative bacteria except for *Pseudomonas aeruginosa*. Neomycin is often used as a selection agent in molecular biology application. It has been reported that cross-resistance occurs between neomycin with kanamycin, framycetin and paromomycin.²

Minimum inhibitory concentration (MIC) of neomycin has been reported for many bacteria. MIC for *Staphylococcus aureus* is 0.5 µg/mL, *Escherichia coli* is 8 µg/mL, and *Proteus vulgaris* is 4 µg/mL.³

Please Note: It is the sole responsibility of the purchaser to determine the appropriateness of this product for the specific plants that are being cultured and applications that are being used.

References

1. Merck **13**, 6482
2. *Martindale: The Complete Drug Reference*, 35th ed., Paul S. Blake, Ed. (Royal Pharmaceutical Society, 2007), p. 272.
3. Van Koten-Vermeulen, J.E.M. and F.X.R. van Leeuwen. "824. Neomycin (Who Food Additives Series 34)". IPCS Inchem. <http://www.inchem.org/documents/jecfa/jecmono/v34je07.htm> (accessed 6 Mar 2013).

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