



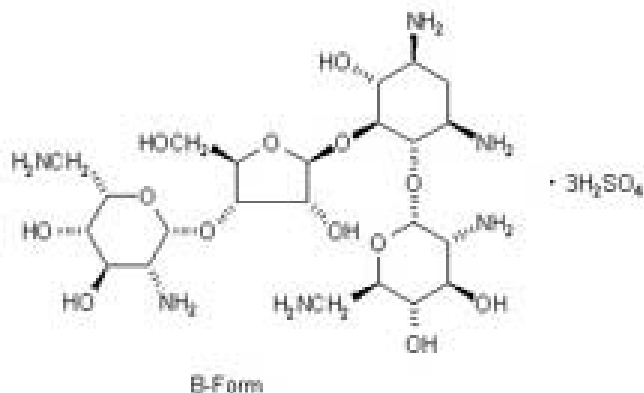
Product Information Sheet

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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