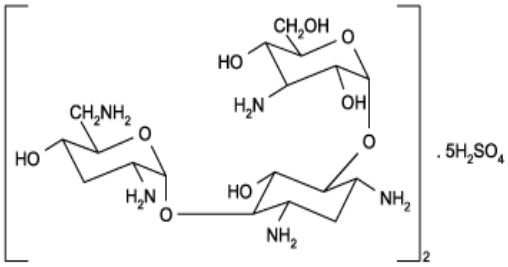
T834
Tobramycin Sulfate

Synonyms:	O-3-Amino-3-deoxy-α-D-glucopyranosyl-(1→6)-O-[2,6-diamino-2,3,6-trideoxy-α-D-ribo-hexopyranosyl-(1→4)]-2-deoxy-D-Streptamine Sulfate
CAS:	79645-27-5
Formula:	$(C_{18}H_{37}N_5O_9)_2 \bullet 5H_2SO_4$
Mol. Weight:	1425.4



Properties

Form:	Powder
Appearance:	White to Cream Powder
Application:	Plant Tissue Culture Antibiotic
Solubility:	Soluble in Water
Storage Temp:	2 to 6 °C
Other Notes:	Average Activity: 634 µg/mg

Application Notes

Tobramycin is an aminoglycoside antibiotic derived from *Streptomyces tenebrarius.* Its mode of action and activity are similar to those of gentamicin. It inhibits the initiation, elongation and termination of protein synthesis by binding to the 30S subunit and sometimes the 50S subunit of the bacterial ribosome.[2] Tobramycin is active against the *Enterobacteriaceae* and *Staphylococcus aureus*; it has been reported that tobramycin is more effective than gentamicin against *Pseudomonas* species.[2,3]

Minimum inhibitory concentration (MIC) of tobramycin has been reported for many different species. MIC for *Staphylococcus aureus* is less than 0.075 µg/mL, *Escherichia coli.Pseudomonas, and Klebsiella-Enterobacter* are less than 0.65 µg/mL, *Proteus mirabilis and Serratia macrescens* are 2.5 µg/mL, and *Proteus rettgeri* is greater than 5 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**, 9567
2. *Martindale: The Complete Drug Reference*, 35th ed., Paul S. Blake, Ed. (Royal Pharmaceutical Society, 2007), p. 316.
3. Britt, Michael R., Richard A. Garibaldi, James N. Wilfert, and Charles B. Smith. 1972. *In vitro* activity of tobramycin and gentamicin. *Antimicrobial Agents and Chemotherapy*. Vol 2(3):236-241.

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P.O. Box 12205; Shawnee Mission, KS 66282-2205
Phone: 1-888-749-8682 or 1-913-341-5343; Fax: 1-888-449-8682 or 1-913-341-5442
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