

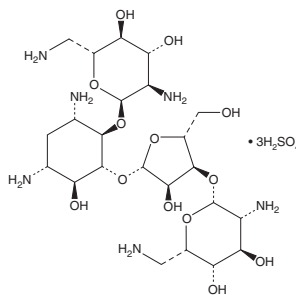
PRODUCT INFORMATION



Neomycin (sulfate)

Item No. 14287

CAS Registry No.: 1405-10-3
Formal Name: neomycin, trisulfate salt
MF: $C_{23}H_{46}N_6O_{13} \cdot 3H_2SO_4$
FW: 908.9
Purity: $\geq 90\%$
Supplied as: A crystalline solid
Storage: Room temperature
Stability: ≥ 4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Neomycin (sulfate) is supplied as a crystalline solid. Aqueous solutions of neomycin (sulfate) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of neomycin (sulfate) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Neomycin is an aminoglycoside antibiotic produced by *S. fradiae* that inhibits protein translation by binding to the small subunit of prokaryotic ribosomes.¹ It blocks voltage-sensitive Ca^{2+} channels and is a potent inhibitor of skeletal muscle sarcoplasmic reticulum Ca^{2+} release.² Neomycin has been shown to inhibit inositol phospholipid turnover, phospholipase C, and phosphatidylcholine-phospholipase D activity ($IC_{50} = 65 \mu M$).³ It is highly effective against Gram-positive and Gram-negative bacteria and is commonly used for the prevention of bacterial contamination of cell cultures.

References

1. Wilson, D.N. The A-Z of bacterial translation inhibitors. *Crit. Rev. Biochem. Mol. Biol.* **44**(6), 393-433 (2009).
2. Vergara, J., Tsien, R.Y., and Delay, M. Inositol 1,4,5-trisphosphate: A possible chemical link in excitation-contraction coupling in muscle. *Proc. Natl. Acad. Sci. USA* **82**(18), 6352-6356 (1985).
3. Liscovitch, M., Chalifa, V., Danin, M., et al. Inhibition of neural phospholipase D activity by aminoglycoside antibiotics. *Biochem. J.* **279**(1), 319-321 (1991).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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