

PRODUCT INFORMATION



Paromomycin (sulfate)

Item No. 23634

CAS Registry No.: 1263-89-4
Formal Name: O-2,6-diamino-2,6-dideoxy-β-L-idopyranosyl-(1→3)-O-β-D-ribofuranosyl-(1→5)-O-[2-amino-2-deoxy-α-D-glucopyranosyl-(1→4)]-2-deoxy-D-streptamine, sulfate

MF: C₂₃H₄₅N₅O₁₄ • XH₂SO₄

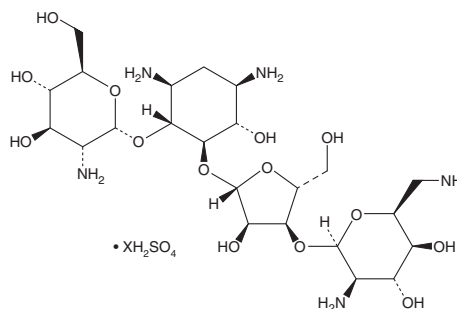
FW: 615.6

Purity: ≥98%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

Paromomycin (sulfate) is supplied as a solid. Aqueous solutions of paromomycin (sulfate) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of paromomycin (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

Paromomycin is an aminoglycoside antibiotic that is effective against Gram-negative and Gram-positive bacteria (MICs = 0.08-3.9 μg/ml).¹ It also has antiprotozoal properties and decreases the parasite burden of mice infected with the leishmanial strain *L. tropica* when administered at doses of 50 mg/kg and 15 mg/kg, through intramuscular or intralesional routes, respectively.² Paromomycin binds to the tRNA decoding A site of the 16S ribosomal RNA in bacteria, inducing a conformational change that disrupts translation and inhibits protein synthesis.³

References

1. Taniyama, H., Sawada, Y., and Tanaka, S. Antibiotics aminosidin. II. Some amino derivatives of aminosidin and their biological activity. *Chem. Pharm. Bull. (Tokyo)* **21(3)**, 609-615 (1973).
2. Heidari-Kharaji, M., Taheri, T., Doroud, D., et al. Solid lipid nanoparticle loaded with paromomycin: In vivo efficacy against *Leishmania tropica* infection in BALB/c mice model. *Appl. Microbiol. Biotechnol.* **100(16)**, 7051-7060 (2016).
3. Vicens, Q. and Westhof, E. Crystal structure of paromomycin docked into the eubacterial ribosomal decoding A site. *Structure* **9(8)**, 647-658 (2001).

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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