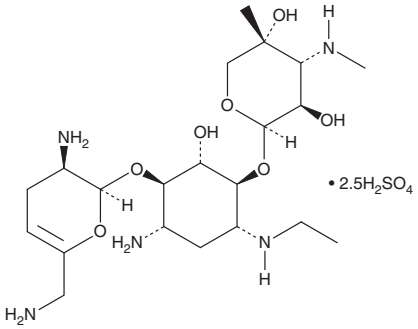
PRODUCT INFORMATION

Netilimicin (sulfate)

Item No. 26666

CAS Registry No.: 56391-57-2
Formal Name: O-3-deoxy-4-C-methyl-3-(methylamino)-β-L-arabinopyranosyl-(1→6)-O-[2,6-diamino-2,3,4,6-tetradeoxy-α-D-glycero-hex-4-enopyranosyl-(1→4)]-2-deoxy-N^1-ethyl-D-streptamine, sulfate (2:5)
Synonyms: Netillin, Netilyn
MF: $C_{21}H_{41}N_5O_7 \bullet 2.5H_2SO_4$
FW: 720.8
Supplied as: A crystalline 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

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

Netilimicin is an aminoglycoside antibiotic.[1] It is active against *S. aureus*, *N. gonorrhoeae*, *E. coli*, *P. mirabilis*, and *P. aeruginosa* (MICs = 0.4, 3.1, 0.8, 1.6, and 0.4 µg/ml, respectively) as well as *Enterococci*, *Enterobacter*, *Citrobacter*, and *Klebsiella* species (MICs = 3.1, 0.4, 0.8, and ≤0.2 µg/ml, respectively). Netilimicin induces nephrotoxicity in rats when administered at doses ranging from 50 to 150 mg/kg.[2] It also induces neuromuscular block, decreasing twitch tension in isolated diaphragm and soleus muscles in rabbits (ED_{50}s = 18.5 and 62.2 mg/kg, respectively).[3] Formulations containing netilimicin were previously used in the intravenous treatment of severe bacterial infections.

References

1. Sanders, C.C., Sanders W.E., J., and Goering, R.V. In vitro studies with Sch 21420 and Sch 22591: Activity in comparison with six other aminoglycosides and synergy with penicillin against enterococci. *Antimicrob. Agents Chemother.* **14(2),** 178-184 (1978).
2. Bowman, R.L., Silverblatt, F.J., and Kaloyanides, G.J. Comparison of the nephrotoxicity of netilmicin and gentamicin in rats. *Antimicrob. Agents Chemother.* **12(4),** 474-478 (1977).
3. Liu, M., Kato, M., and Hashimoto, Y. Neuromuscular blocking effects of the aminoglycoside antibiotics arbekacin, astromicin, isepamicin and netilmicin on the diaphragm and limb muscles in the rabbit. *Pharmacology* **63(3),** 142-146 (2001).

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