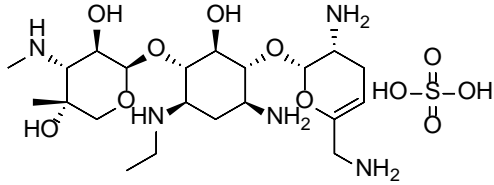


# Product data sheet



MedKoo Cat#: 561029 Name: Netilmicin Sulfate CAS: 56391-57-2 Chemical Formula: C <sub>21</sub> H <sub>43</sub> N <sub>5</sub> O <sub>11</sub> S Molecular Weight: 573.659	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

## 1. Product description:

Netilmicin Sulfate is a semisynthetic, water soluble aminoglycoside antibiotic obtained by chemical modification of sisomicin. It is active against both Gram-positive and Gram-negative bacteria, including strains which are resistant to other aminoglycosides.

## 2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

## 3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	1.0	1.39
Water	194.0	338.18

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.39 mL	6.94 mL	13.87 mL
5 mM	0.28 mL	1.39 mL	2.77 mL
10 mM	0.14 mL	0.69 mL	1.39 mL
50 mM	0.03 mL	0.14 mL	0.28 mL

## 5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

## 6. Recommended literature which reported protocols for in vitro and in vivo study

### In vitro study

- Wrześniok D, Beberok A, Otreba M, Buszman E. Netilmicin-induced modulation of melanogenesis in HEMa-LP melanocytes. *Acta Pol Pharm.* 2013 Sep-Oct;70(5):803-8. PMID: 24147358.
- Bonfiglio G, Scuderi AC, Russo G. Netilmicin: in vitro activity, time-kill evaluation and postantibiotic effect on microorganisms isolated from ocular infections. *Chemotherapy.* 2001 Mar-Apr;47(2):117-22. doi: 10.1159/000048510. PMID: 11173813.

### In vivo study

- Josepovitz C, Farruggella T, Levine R, Lane B, Kaloyanides GJ. Effect of netilmicin on the phospholipid composition of subcellular fractions of rat renal cortex. *J Pharmacol Exp Ther.* 1985 Dec;235(3):810-9. PMID: 3001278.

## 7. Bioactivity

### Biological target:

Netilmicin (sulfate) (SCH-20569 (sulfate)) is an active aminoglycoside antibiotic.

### In vitro activity

The aim of this work was to examine the impact of netilmicin on melanogenesis in cultured normal human melanocytes (HEMa-LP). The WST-1 assay was used to detect netilmicin cytotoxic effect. Netilmicin induced concentration-dependent loss in melanocytes viability.

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Reference: Acta Pol Pharm. 2013 Sep-Oct;70(5):803-8. <https://pubmed.ncbi.nlm.nih.gov/24147358/>

## In vivo activity

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The total phospholipid contents of the mitochondrial, microsomal, brush border membrane and basolateral membrane fractions of netilmicin-injected rats were higher by approximately 10% than the respective fractions of control rats and each fraction exhibited a significant increase of one or more of the four phospholipids elevated in the renal cortical homogenate and in the lysosomal fraction. The data indicate that the myeloid body is the primary source of the lysosomal phospholipidosis induced by netilmicin which provides support for the hypothesis that the lysosomal phospholipidosis is secondary to aminoglycoside-induced inhibition of phospholipid degradation.

Reference: J Pharmacol Exp Ther. 1985 Dec;235(3):810-9. <https://pubmed.ncbi.nlm.nih.gov/3001278/>

*Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.*