

**Product Name**

Name: Gentamicin Sulfate Solution, 50 mg/mL

Cat. No.: C3450-0100

Size: 100 mL

**Product Description**

Gentamicin sulfate is an aminoglycoside (aminocyclitol) antibiotic isolated from *Micromonospora purpurea* and represents the products of secondary carbohydrate metabolism. They are a closely related group of bactericidal antibiotics and have broadly similar toxicological features. Gentamicin sulfate is an antimicrobial agent with bactericidal properties against Gram-negative, Gram-positive bacteria, and *Mycoplasma spp.* Its mode of action (MOA) includes its binding to the L-6 protein of the 50S ribosomal subunit, inhibiting translocation, eliciting miscoding, and thereby inhibiting protein synthesis and compromising the bacterial cell-wall/membrane structure and eventually causing bacterial cell death. The 2-deoxystreptamine-containing antibiotics include the structurally related neomycins and streptomycins.

Cross-resistance occurs between kanamycin, neomycin, paromomycin, and framycetin, and partial cross-resistance has been reported between kanamycin and streptomycin. The aminoglycosides are excellent at synergizing with the  $\beta$ -lactams and glycopeptides to improve the efficiency of their bactericidal activity. It is incompatible with amphotericin, penicillins, sodium bicarbonate, and other drugs.

**Important Note:** Please consult other comprehensive pharmacology references regarding other antibiotic properties, characteristics, interactions, and possible incompatibilities.

Some Predominant Characteristics include:

- Easy-to-use formulation
- Bactericidal activity
- Stable in solution
- Sterile-filtered

**Storage and Stability**

The product should be kept at **-20°C**.

The product is **light-sensitive** and therefore should not be left in the light.

Shelf life: 24 months from date of manufacture.

**Procedure**

1. Take a bottle from the freezer at -20°C and read the label.
2. Ensure that the cap of the bottle is tight.
3. Allow to thaw to room temperature prior to use.
4. Gently swirl the solution in the bottle intermittently until all the content is thawed.
5. Wipe the outside of the bottle with a disinfectant solution such as 70% ethanol.
6. Pipette appropriate volume using an aseptic/sterile technique under a laminar-flow culture hood.
7. Aliquot the remaining solution and put them back to freezer to avoid repeated freezing and thawing.
8. Recommended dilution ratio: 1:1000

**Quality Control**

Gentamicin Sulfate Solution is tested for sterility, pH.

**Precaution and Disclaimer**

For research use only, not for clinical diagnosis, and treatment.