



## Gentamycin (Gentamicin) Sulfate USP

### Catalog number

G2030

### Supplier

United States Biological

Broad spectrum, cell culture aminoglycoside antibiotic that is non toxic to viruses and mammalian cells at antibacterial levels. Inhibits growth of gram positive and negative bacteria, and mycoplasma. Inhibits normal protein synthesis by binding to L6 protein of 50S ribosomal subunit. Useful antibiotic for Baculovirus expression systems since mutations in rplf prevent Gentamycin from binding.

**Causes codon misreading by binding to the 30S ribosomal subunit, blocking the translocation of peptidyl-tRNA from the acceptor site to the donor site. Antibacterial against Gram-negative aerobic bacteria, Gram-positive bacteria and mycoplasmas. Used as a selection agent (gentamicin-resistance gene) in molecular biology applications. Broad-spectrum cell culture antibiotic that is nontoxic to viruses and mammalian cells at antibacterial and antimycoplasmal concentrations. Due to its extended stability and slow development of bacterial resistance, it is a useful antibiotic in long-term virus und tissue culture studies.**

**Bactericidal effects are exerted by the binding to the outer membrane, causing disruption of the membrane. This increases the permeability of the cell envelope, leakage of cell contents, and leading to apoptosis and proteolysis (cell death). Causes also cell death by generation of free radicals, phospholipidosis, extracellular calcium-sensing recep- tor stimulation and energetic catastrophe.**

### Source

Micromonospora sp.

### Synonyms

Alcomici; Bristagen; Cidomycin; Duragentam; Garamycin; Garasol; Apogen, Gentiomycin C, Refobacin, NSC-82261; Gentamycin sulphate

### CAS Number

1405-41-0

### Molecular Formula

C<sub>21</sub>H<sub>43</sub>N<sub>5</sub>O<sub>7</sub>.H<sub>2</sub>SO<sub>4</sub>

### Molecular Weight

~575.6

### Appearance

White to light tan powder

### Potency

≥590ug Gentamycin/mg



**Working Concentration**

15-30ug/ml

**Endotoxin**

≤2Eu/mg

**Solubility (Water and DMF)**

Colorless, clear

**Storage and Stability**

Store at 4°C. Stable for 12 months.

Meets or exceeds USP specifications

**Formulation**

White to light tan powder

**Purity**

Potency: ≥590ug Gentamycin/mg

**Grade**

Cell Culture Grade

**Storage**

4°C

**MW**

575.6

**Formula**

C<sub>21</sub>H<sub>43</sub>N<sub>5</sub>O<sub>7</sub>.H<sub>2</sub>SO<sub>4</sub>

**Antigen Modification**

Micromonospora sp.

**Reference**

1. Hawdon, N.A. et al., (2010) FEMS: Immunology and Medical Microbiology 59; 207-220. 2. Merck Index, 1996., 12: 4398.