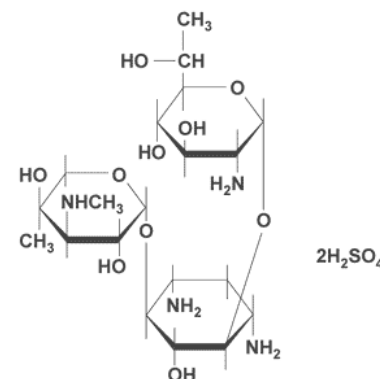


G-418 Sulfate
*Antibiotics***Catalogue Number:** MA017/MA017-40MG/MA017-100MG

Product Description: G-418 (also known as Geneticin (Geneticin is a registered trademark of Gibco BRL Life Technologies, Inc)) is an aminoglycoside antibiotic similar in structure to gentamicin B1. It is produced by *Micromonospora rhodorangea*. G-418 blocks polypeptide synthesis by inhibiting the elongation step in both prokaryotic and eukaryotic cells. Resistance to G-418 is conferred by the neo gene from Tn5 encoding an aminoglycoside 3'-phosphotransferase, APH 3' II. G-418 is commonly used in laboratory research to select genetically engineered cells. In general for bacteria and algae concentrations of 5 mg/L or less are used, for mammalian cells concentrations of approximately 400 mg/L are used for selection and 200 mg/L for maintenance. However, optimal concentration for resistant clones selection in mammalian cells depends on the cell line used as well as on the plasmid carrying the resistance gene, therefore antibiotic titration should be done to find the best condition for every experimental system. Titration should be done using antibiotic concentrations ranging from 100 mg/L up to 1400 mg/L. Resistant clones selection could require from 1 to up to 3 weeks. G-418 is soluble in water (50 mg/ml).

Molecular Formula: C₂₀H₄₀N₄O₁₀•2H₂SO₄**Molecular Weight:** 692.44

Application: G-418 is used to select and maintain stable eukaryotic cell lines that have been transfected with vectors containing the gene for neomycin resistance. This antibiotic inhibits microbial contamination in tissue culture and molecular biology applications. The effective killing concentration of G-418 varies with the cell type, media, growth conditions, and the cells' metabolic rate and position in the cell cycle. Effective concentrations have been reported from 100 µg/mL up to 5 mg/mL.

Packing Size: 1 mL**Formulation:** see table below**Storage & Stability:** 4 °C for over one year; -20 °C for long term storage

<i>Catalogue Number:</i>	<i>Concentration</i>	<i>Solvent</i>	<i>Appearance</i>
MA017	10 mg/mL	Water	Clear, yellow solution
MA017-40MG	40 mg/mL	Water	Clear, yellow solution
MA017-100MG	100 mg/mL	Water	Clear, yellow solution

Notes:

- ◇ Stop using when the color of G-418 solution turns into dark brown.
- ◇ The cell culture medium turns color into yellow when the G-418 concentration reaches 1mg/mL.

FOR RESEARCH USE ONLY, NOT FOR USE IN DIAGNOSTIC AND THERAPEUTIC PROCEDURES

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