

# G-418 Sulfate (Geneticine)

## Product Description

### G-418 Sulfate

Geneticine, Aminoglycoside

CAS [108321-42-2] ; MW: 692.7

**Name:** **G-418 Sulfate, powder**
**Catalog #:** 652495,1G      652496, 5x1g      652497, 5g

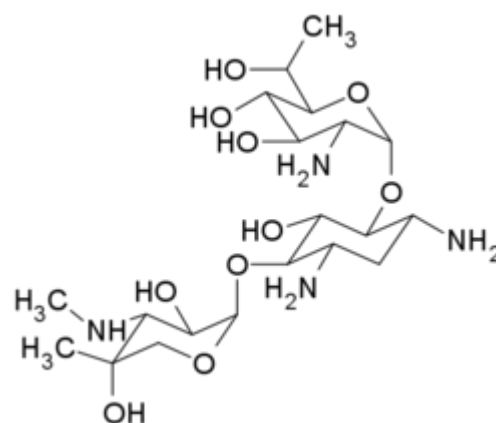
**Name:** **G-418 Sulfate, 50mg/ml Sterile-Filtered Solution**
**Catalog #:** CNT440A, 10ml 65249C, 50ml  
65249B, 5x10ml 65249D, 100ml

**Name:** Appearance Liquid  
Purity: >700 µg/mg

**Storage:** +4°C (L)

For Research Use Only

RTECS: CB9378500



## Information

G418 (also known as Geneticin™) is an aminoglycoside antibiotic similar in structure to gentamicin B1. It is produced by *Micromonospora rhodorangea*.

G418 irreversibly binds to 80S ribosomal subunit, disrupting proofreading. It inhibits the elongation step in both prokaryotic and eukaryotic cells, hence blocks polypeptide synthesis.

G418 is widely used as in selection of genetically engineered cells that include a marker (typically the neo bacterial gene from Tn5 encoding an aminoglycoside 3'-phosphotransferase, APH 3' II; KanMX marker) that confers resistance to G418 (inactivates G418, neomycin and kanamycin by phosphorylation). This is used to select for the marker i.e. transfected mammalian, yeast, plant and bacteria cells. Resistant clones selection could require from 1 to up to 3 weeks.

Typical concentrations of use are 50 mg/L or less for bacteria and algae, 20-200 µg/ml for plant cells & bacteria cells and 200-1000 µg/ml for fungi. Reported concentrations include:

- bacteria : 8-16 for selection
  - plant cells : 10 for maintenance, and 25-50 for selection
  - mammalian cells : 200 for maintenance, and 400 for selection
  - yeast: after transformation incubate culture at 30°C for 2-3 hours and then plate on YPD containing 200 mg/L (=µg/ml) G418.
- However, antibiotic titration (100 mg/L up to 1400 mg/L) should be done to find the best condition for every experimental system, depending on cell line used and the plasmid carrying the resistance gene.

## Other Information

For in vitro R&amp;D use only

Geneticin is a registered trademark of Gibco

## Related / associated products and documents

Other antibiotics: FT-[308664](#).

See [BioSciences Innovations catalogue](#) and [e-search tool](#).

Please contact InterBioTech – Interchim for any other information

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