



G418 Sulfate, Cell-Culture Tested

Cat. No. 345810

Size
100 mg
250 mg
500 mg
1 g
5 g

Synonyms: Antibiotic G418 Sulfate; Geneticin[®]

Description: Aminoglycoside antibiotic related to gentamycin that inhibits prokaryotic and eukaryotic protein synthesis, is toxic to bacteria, yeast, protozoans, helminths, higher plant and mammalian cells. Used in molecular genetics as a selective agent for the bacterial *neo^r/kan^r* genes. The product of these genes, aminoglycoside 3'-phosphotransferase, inactivates G418, neomycin, and kanamycin by phosphorylation. Introduction of either of these genes into cells can confer resistance to G418, which enables cells to grow in media containing G418.
Recommended usage: The optimal concentration of G418 for selection of resistance will vary according to the organism and/or cell type under investigation. In general, the concentration of active drug required for selection is as follows:

Dictyostelium sp.: 10 –100 µg/ml
Plant cells: 10 –100 µg/ml
Yeast cells: 0.5 –1.0 mg/ml
Mammalian cells: 0.1 - 2.0 mg/ml

A multiplying cell will be affected by the presence of G418 sooner than a resting cell. It will take at least two cell generations to achieve cell death in sensitive cell lines.

Form: Crystalline solid.

CAS Number: 108321-42-2

RTECS: CB9378500

Molecular Weight: 692.7

Molecular Formula: C₂₀H₄₀N₄O₁₀ · 2H₂SO₄

Germany
Tel 0800 6931 000

USA & Canada
Tel (800) 628-8470

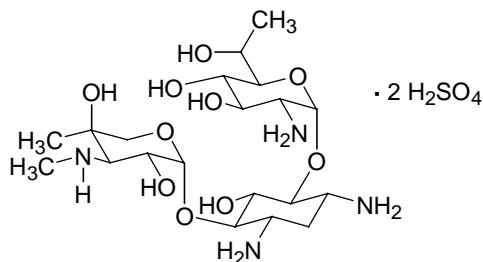
United Kingdom
Tel 0115 9430 840

E-mail address for technical inquiries: technical@calbiochem.com
Find our current product data sheets on the web: <http://www.calbiochem.com>

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Structure:



Purity: ≥98% by TLC

Potency: ≥700 µg/mg

Solubility: H₂O, aqueous buffers, or culture medium. Typically a stock solution of 10-50 mg/ml active drug is prepared in a highly buffered solution (e.g. 100 mM HEPES, pH 7.3, or cell culture medium).

Storage: Room temperature (+20°C). Following reconstitution, sterilize by filtration through a 0.22 µm or 0.45 µm pore size filter, aliquot and freeze (-20°C) for long term storage or refrigerate (+4°C) for short-term storage. This product is stable for 2 years as supplied. Sterile stock solutions are stable for at least 1 year at +4°C.

Toxicity: MSDS available upon request.

References: Ethier, S.P., and Taback, E. 1993. *Cancer Lett.* **74**, 189.
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