

Product Information

G-418 Sulfate, liquid and powder

Product Description

G-418 is used in the selection and maintenance of eucaryotic cells stably transfected with neomycin resistance genes. G-418 is an aminoglycoside antibiotic, related to Gentamicin, and exhibits toxicity towards both eukaryotic and prokaryotic cells. It is produced by *Micromonospora rhodorangea* and acts by binding the ribosome, thus inhibiting protein synthesis in both prokaryotic and eukaryotic cells.

Product	Form	Volume	Cat. No.
G-418 Sulfate	Powder	5 g	TT005-920
		10 g	TT010-920
G-418 Sulfate	Solution, 100 % activity (50 mg/ml)	10 ml	T0010-930
		100 ml	T0100-930

Product Specifications, liquid

Product	G-418 Disulfate
Molecular Weight	692.7 g/mol
CAS No.	108321-42-2
Concentration	50 mg/ml
Activity	100% (According to biological potency of the antibiotic dissolved the solution is adjusted to obtain a 100% active solution with defined working concentration of 50 mg/ml of G-418 antibiotic.)
Sterility	Tested
Storage	≤-15 °C

Product Specifications, powder

Product	G-418 Disulfate
Molecular Weight	692.7 g/mol
CAS No.	108321-42-2
Potency	≥700 µg/mg
Storage	Shipped at ambient temperature. Upon receipt, store at +2°C to +8°C in cool and dry conditions.
Application	Before application in cell culture, prepare a sterile filtered stock solution of 10 – 50 mg/ml in water. Refer to lot certificate of analysis for microbiological potency. Once reconstituted, stock solutions are stable for approx. 8 weeks at +4°C and approx. 2 years when frozen (-20°C). Avoid repeated freeze/thaw cycles.

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Working Concentration

Recommended final concentration: 0.1 – 1.0 mg/ml depending on the cell type:

Cell type	Selection concentration µg/ml
HeLa	200 – 600
3T3 cells	500 – 1000
CHO	200 – 400
HEK 293	500 – 800
Jurkat cells	600 – 700

Important Information

- Do not use G-418 with antibiotic/antifungal preparations (e.g. Pen/Strep). These agents are competitive inhibitors of G-418. Other antibiotics are potentially cross-reactive as well.
- Good laboratory practice requires that the optimal concentration of biologically active G-418 required to select and maintain cells must be determined for each set of growth conditions. G-418 is used in the concentration range of 100 – 200 µg/ml for bacteria, or 200 – 500 µg/ml for most mammalian cells. Concentrations of G-418 required for maintenance of selected cell lines are typically ≤50 % that required for selection.
- It is recommended that whenever experimental conditions are altered, the optimal concentration of the product should be re-evaluated.

Precautions and Disclaimer

This product is for research use only. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.