

G418

An antibiotic for selection of neomycin resistance in transfected cells

1g

400元

MW: 692.71

Molecular formula: $C_{20}H_{40}N_4O_{10} \cdot 2H_2SO_4$

CAS: 108321-42-2

Specifications

Biological activity.....Potency \geq 730 μ g/mg

Purity..... \geq 98% by TLC

Form.....Crystalline solid

Product Introduction

G 418 is an aminoglycoside antibiotic similar in structure to gentamycin. It exhibits toxicity towards both eukaryotic and prokaryotic cells. The optimal concentration for selection and maintenance must be determined for each cell line. For bacteria and algae, concentrations of 5 μ g/ml or less are recommended. Animal cells may require up to 300-500 μ g/ml. Typically, resistance is conferred by one of two dominant genes of bacterial origin, which can be expressed in eukaryotic cells. Cells that are multiplying will be affected sooner than those that are not. Cells in log phase may require three to seven days for selection. In general, concentrations of approximately 400 μ g/ml for selection and 200 μ g/ml for maintenance are required for mammalian cells.

Preparation Instructions

The G 418 powder is soluble in water at 50 mg/ml.

Storage and Stability

The G 418 powder is stable for three years as supplied when stored at 2–8 °C. The G 418 solution is stable for two years at 2–8 °C.

References

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2. Ursic, D., et al., A new antibiotic with known resistance factors, G 418, inhibits plant cells. **Biochem. Biophys. Res. Commun.**, 101, 1031 (1981).
3. Colbere-Garapin, F., et al., A new dominant hybrid selective marker for higher eukaryotic cells. **J. Mol. Biol.**, 150, 1 (1981).
4. Jimenez, A., and Davies, J., Expression of a transposable antibiotic resistance element in *Saccharomyces*. **Nature**, 287, 869 (1980).
5. Hirth, K.P., et al., A DNA-mediated transformation system for *Dictyostelium discoideum*. **Proc. Natl. Acad. Sci. USA**, 79, 7356 (1982).

