

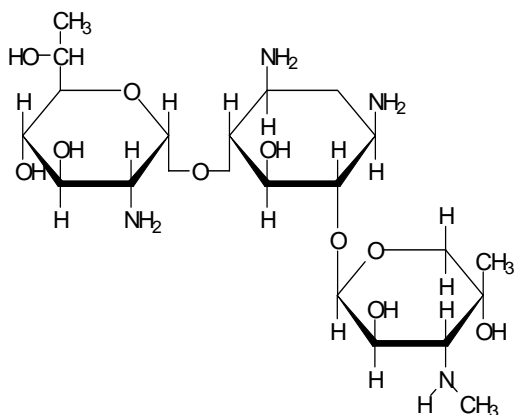
## Product Information

### G 418 disulfate salt

Product Codes **G 5013, G 8168, A 1720, G 1279,**  
**and A 8601**

Storage Temperature 2-8 °C

CAS# 108321-42-2



### Product Description

Molecular weight: 692.7

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

Specific Rotation: +104.4° (c = 0.3% in H<sub>2</sub>O at 26 °C)

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 µg/ml or less are recommended. Animal cells may require up to 300-500 µg/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 µg/ml for selection and 200 µg/ml for maintenance are required for mammalian cells.

### Reagents

Products G 5013, A 1720, G 1279, and A 8601 are sold as powders. G 8168 is a 5% aqueous solution prepared from A 1720.

Products A 1720 and G 8168 are cell culture tested. Product G 1279 is tested for plant cell culture applications. A 8601 is Biotechnology Performance Certified grade.

### Preparation Instructions

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

### Storage/Stability

The G 418 powder is stable for three years as supplied when stored at 2-8 °C. The G 418 solution (Product Code G 8168) is stable for two years at 2-8 °C

### References

1. Loebenberg, D., et al., G 418, a new micromomospore-produced aminoglycoside with activity against protozoa and helminths: antiparasitic activity. *Antimicrob. Agents Chemother.*, **7**, 811 (1975).
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).

LMY/MAM 7/03

Sigma brand products are sold through Sigma-Aldrich, Inc.

Sigma-Aldrich, Inc. warrants that its products conform to the information contained in this and other Sigma-Aldrich publications. Purchaser must determine the suitability of the product(s) for their particular use. Additional terms and conditions may apply. Please see reverse side of the invoice or packing slip.