G-418 Sulfate
Item No. 13200

CAS Registry No.: 108321-42-2
Formal Name: O-2-amino-2,7-dideoxy-D-glycero-α-D-gluco-heptopyranosyl-(1→4)-O-[3-deoxy-4-C-methyl-3-(methylamino)-β-L-arabinopyranosyl-(1→6)]-2-deoxy-D-streptamine, disulfate
Synonym: Geneticin
MF: C_{20}H_{40}N_{4}O_{10} \cdot 2H_{2}SO_{4}
FW: 692.7
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid

Laboratory Procedures
For long term storage, we suggest that G-418 sulfate be stored as supplied at -20°C. It should be stable for at least two years.

G-418 sulfate is supplied as a crystalline solid. G-418 sulfate is sparingly soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. For biological experiments, we suggest that organic solvent-free aqueous solutions of G-418 sulfate be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of G-418 sulfate in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

G-418 sulfate is an aminoglycosidic antibiotic that is related to gentamicin. It is toxic to both prokaryotic and eukaryotic cells, as it blocks protein elongation during translation. G-418 is commonly used for the selection of cells that are genetically engineered with a plasmid containing the neo (neor) gene, which provides resistance to G-418. In mammalian cells, selection is commonly performed using 400 mg/L G-418, followed by 200 mg/L for culture maintenance; optimal concentrations may depend on cell type or plasmid and should be empirically determined. ¹

Reference

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