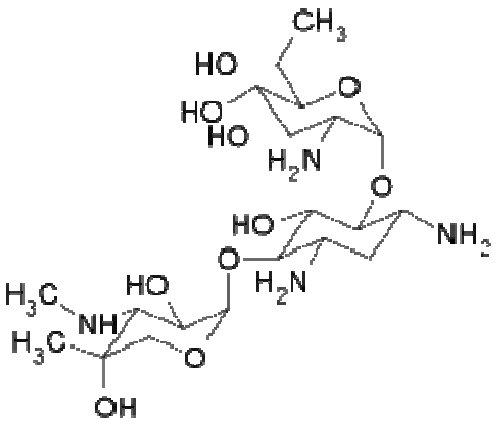
ALPHA DIAGNOSTIC INTERNATIONAL

LIFE TECH Life Technologies™ Your Molecular & Cell Technology Partner

Product Data Sheet

Cat # ABT-800-01	Geneticin (G418, Pharma Grade)	Size: 1 g
Cat # ABT-800-05	Geneticin (G418, Pharma Grade)	Size: 5 g

G418 (also known as Geneticin (Geneticin is a registered trademark of Gibco BRL Life Technologies)) is an aminoglycoside antibiotic similar in structure to gentamicin B1. It is produced by Micromonospora rhodorangea. G418 blocks polypeptide synthesis by inhibiting the elongation step in both prokaryotic and eukaryotic cells. Resistance to G418 is conferred by the neo gene from Tn5 encoding an aminoglycoside 3'-phosphotransferase, APH 3' II. G418 is commonly used in laboratory research to select genetically engineered cells (typically using the KanMX selectable marker). In general for bacteria and algae concentrations of 5 mg/L or less are used, for mammalian cells concentrations of approximately 400 mg/L are used for selection and 200 mg/L for maintenance. However, optimal concentration for resistant clones selection in mammalian cells depends on the cell line used as well as on the plasmid carrying the resistance gene, therefore antibiotic titration should be done to find the best condition for every experimental system. Titration should be done using antibiotic concentrations ranging from 100 mg/L up to 1400 mg/L. Resistant clones selection could require from 1 to up to 3 weeks. G418 is soluble in water (50 mg/ml).



Molecular Formula:
(C20H40N4O10)
Molecular Weight:
692.70 g/mol

Property	Specification
Appearance	White powder
Solubility	50 mg/ml in water
Specific rotation (+104-115o)	+115o
Water (<6%)	5.6%
Absorbance (A570 <0.10) (A280, 0.015)	0.02 0.03
TLC (<6 spots)	<1 spots
Assay (on dry basis) >620 u/mg	733 u/mg
QC results (within specified range)	Pass

ABT-800-01 **111103A**

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