

Geneticin® (G-418 Sulfate)

Description

Geneticin® Selective Antibiotic is an aminoglycoside antibiotic, related to Gentamicin, toxic to bacteria, yeast, protozoans and helminthes, and higher plant and mammalian cells. Geneticin® Selective Antibiotic, also known as Antibiotic G-418 Sulfate, is produced by the bacterium *Micromonospora rhodorangea* and acts by binding the ribosome, thus inhibiting protein synthesis in both prokaryotic and eukaryotic cells. Geneticin® Selective Antibiotic is used as a selective agent in molecular genetics experiments. Resistance to Geneticin® Selective Antibiotic is conferred by the neomycin resistance genes, which are dominant and are located on both transposons Tn601 (903) (aminoglycoside phosphotransferase 3' [I] or APH [3']I) and Tn5 (aminoglycoside phosphotransferase 3' [II] or APH [3']II). Liquid Geneticin® Selective Antibiotic is supplied as a clear, colorless solution containing 50 mg/mL active Geneticin® Selective Antibiotic.

Product	Catalog no.	Amount	Storage	Shelf life*
Geneticin®, liquid (G-418 Sulfate)	10131-027	100 mL	2°C to 8°C; Protect from light	24 months
	10131-035	20 mL		
Geneticin®, powder (G-418 Sulfate)	11811-023	1 g	15°C to 30°C	3 years
	11811-031	5 g		
	11811-098	25 g		

* Shelf life duration is determined from Date of Manufacture.

Product use

For Research Use Only. Not for use in diagnostic procedures.

Important information

- Do not use Geneticin® Selective Antibiotic with other antibiotic/antifungal preparations (e.g., Pen/Strep). These agents are competitive inhibitors of G418. Other antibiotics are potentially cross-reactive as well.
- Liquid Geneticin® Selective Antibiotic is presolublized in cell culture grade water.
- Geneticin® Selective Antibiotic powder is soluble in water. Stock solutions should be filter sterilized prior to storage at 2°C to 8°C. Refer to individual bottle label or lot certificate of analysis for microbiological potency.
- Once reconstituted, stock solutions of Geneticin® Selective Antibiotic may be stored at -20°C to -5°C for up to 24 months or at 2°C to 8°C for up to 6 months.
- Geneticin® Selective Antibiotic is stable for 8–10 days at 37°C.

Safety information

WARNING! Harmful by inhalation, in contact with skin and if swallowed. Do not breathe dust. Avoid contact with skin and eyes. Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves.

Use

The amount of Geneticin® Selective Antibiotic required for selection of resistant cells varies with a number of factors including cell type. For users who have traditionally used Geneticin® Selective Antibiotic (liquid or powder) on the basis of microbiological potency, no change in the effective dose range is required when using either liquid or powder. Simply dilute to the proper concentration in culture medium. For users who have established the concentrations used for selection and maintenance based on the weight of powdered Geneticin® Selective Antibiotic, a 20–30% reduction in the amount of Geneticin® Selective Antibiotic needed should be realized when switching to liquid Geneticin® Selective Antibiotic.










Good laboratory practice requires that the optimal concentration of biologically active Geneticin® Selective Antibiotic (G418 Sulfate) required to select and maintain cells must be determined for each set of growth conditions. Geneticin® Selective Antibiotic is used in the concentration range of 100–200 µg/mL for bacteria, or 200–500 µg/mL for most mammalian cells. Concentrations of Geneticin® Selective Antibiotic 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.

Related products

Product	Catalog no.
Hygromycin B, 50 mg/mL Solution	10687
Water, Distilled	15230
WFI for Cell Culture, USP	A12873

Explanation of symbols and warnings

The symbols present on the product label are explained below:

				
Temperature Limitation	Manufacturer	Batch code	Use By:	Catalog number
				
Caution, consult accompanying documents	Consult instructions for use	Keep away from light*	Sterilized using aseptic processing techniques*	

* For SKU 10131 Only.

Limited Product Warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale found on Life Technologies' website at www.lifetechnologies.com/termsandconditions. If you have any questions, please contact Life Technologies at www.lifetechnologies.com/support.

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For additional technical information such as Safety Data Sheets (SDS), Certificates of Analysis, visit www.lifetechnologies.com/support. For further assistance, email techsupport@lifetech.com.

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