G418 disulfate - Solution, sterile

Antibiotic G418
Product No. A6798

Description

G418 disulfate (equivalent to Geneticin® disulfate) blocks protein synthesis in mammalian cells by interfering with ribosomal function. It is an aminoglycoside antibiotic, similar in structure to neomycin, gentamycin, and kanamycin. G418 disulfate is used for the selection of stably transformed cells, which have incorporated the neomycin resistance gene (aminoglycoside phosphotransferase) derived from the transposons Tn 5 and Tn 601, respectively.

Since this antibiotic is toxic for many cells, one has to determine the optimal concentration for each cell type. In general this concentration varies from 50 to 1000 µg/ml. At a concentration of 500 µg/ml 70 % of HepG2-cells are killed within one week of incubation and 100 % stop growing (2). Different lots of G418 disulfate can have different potencies. Therefore it is recommended to buy a large amount of one lot to standardize selection conditions. Cells will divide once or twice in the presence of lethal dosis of G418 disulfate, so the effects of the antibiotic take several days to become apparent (3).

Storage and Stability:	Solutions of G418 disulfate are stable at -20°C for approx. 2 years. At 2-8°C the solution is stable for approximately 6 months. The product is shipped on ice. However, short periods at RT do not impair the quality of the product.
Order-No.:	A6798,0010 (10 ml) A6798,0020 (20 ml)
Concentration:	50 mg/ml of active antibiotic
pH value:	4.0 - 6.0
Quality Control:	The production process is validated. The sterile filtration is validated by Sartorius AG; additional quality tests performed by an independent institute, Biochem GmbH, Karlsruhe Germany.

Literature:

(1) Liscovitch, M. *et al*. (1991) *Biochem. J*. **279**, 319-321. Inhibition of neural phospholipase D activity by aminoglycoside antibiotics.
(2) Kumar, S. *et al*. (1994) *Biochem. Mol. Biol. Int*. **32**, 1059-1066. A comparative evaluation of three transfection procedures as assessed by resistance to G418 conferred to HEG2 cells.
(3) Ausubel, F.A., Brent, R., Kingston, R.E., Moore, D.D., Seidman, J.G., Smith, J.A. & Struhl, K. (eds.) 2000. *Currrent Protocols in Molecular Biology*. Page 9.5.7 Suppl. 39 John Wiley & Sons, New York.