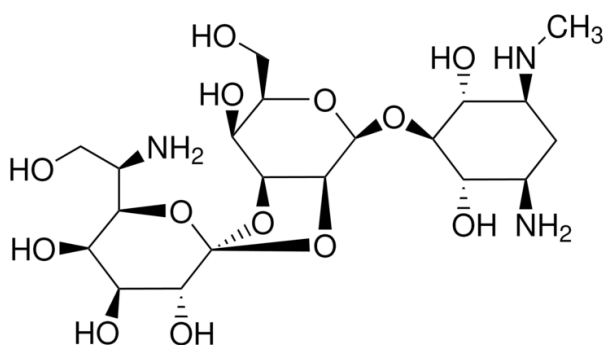


Hygromycin B 50mg/mL

Antibiotics

CATALOG NUMBER: MA020

DESCRIPTION:



Hygromycin B is an aminoglycoside antibiotic isolated from *Streptomyces hygroscopicus*. It is commonly used to study protein synthesis. In addition to being effective against bacteria, fungi, and higher eukaryotic cells, Hygromycin B is also an antiviral that selectively enters cells that have become permeable due to viral infection, thereby inhibiting translation. It is a standard selection antibiotic in genetic experiments, and is particularly useful for selecting for hygromycin-resistant genetically transformed cells.

Aminoglycoside antibiotics consist of amino groups attached to glycosides. They bind to the 30S ribosomal subunit, causing misreading of the mRNA sequence and inhibiting translation. As a result, protein synthesis is inhibited.

Antibiotics are commonly used in clinical in vitro tests, known as antimicrobial susceptibility tests or ASTs, to determine their efficacy against certain bacterial species. Medical microbiologists use

antimicrobial panels, antimicrobial trays, and MIC papers to test for both Gram-negative and Gram-positive bacteria. AST reduces the risk of antibiotic resistance to bacteria, and the results can be used in the clinical setting to determine which antibiotics to prescribe for various infections.

APPLICATION:

Hygromycin B is used as a selective agent in molecular genetics experiments on a wide variety of eukaryotic and prokaryotic species. The *hph* gene confers hygromycin-resistance to cells expressing it and many vectors carrying the *hph* gene.

CAS NUMBER: 31282-04-9

MOLECULAR WEIGHT: 527.52

STRUCTURE: C₂₀H₃₇N₃O₁₃

PACKING SIZE: 1mL

CONCENTRATION: 50mg/mL (20mM HEPES, pH7.3)

WORKING CONCENTRATION: Mammalian cells are sensitive to Hygromycin B concentrations of 50-200µg/mL, and bacteria to 50-100µg/mL.

STERILITY: 0.22µm filtered

STORAGE & STABILITY: 2-8°C for 1 month; -20°C for long term storage.

REFERENCES:

1. Gritz L. & Davies J., 1983. Gene 25:179-88.
2. Cullen D. et al., 1987. Gene 57:21-6.
3. Santerre R. et al., 1984. Gene 30:147-56.

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