

Product Name: Hygromycin B

Catalog No.: 4137

Batch No.: 4

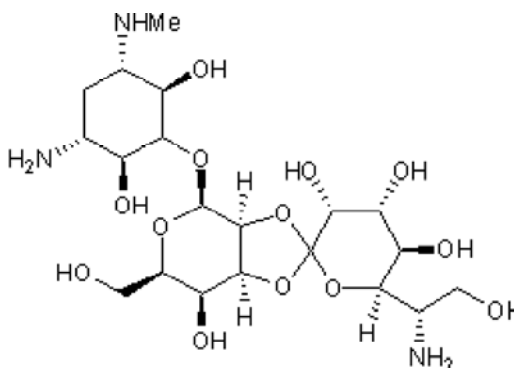
CAS Number: 31282-04-9

EC Number: 250-545-5

IUPAC Name: O-6-Amino-6-deoxy-L-glycero-D-galacto-heptopyranosylidene-(1-2-3)-O-β-D-talopyranosyl(1-5)-2-deoxy-N3-methyl-D-streptamine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula:	C ₂₀ H ₃₇ N ₃ O ₁₃
Batch Molecular Weight:	527.52
Physical Appearance:	Pale yellow solid
Solubility:	Soluble to 100 mM in water
Storage:	Store at +4°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows 92.4% purity
Potency:	1170 µg/mg
Cytotoxicity:	Positive, CHO cell line
Endotoxicity:	<10 EU/mg
Water content:	<8%
Residue on ignition:	<0.3%

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Aminoglycoside antibiotic. Active against both prokaryotic and eukaryotic cells. Inhibits protein synthesis by binding to the 30S subunit and inhibiting the ribosomal translocation step of elongation.

Physical and Chemical Properties:

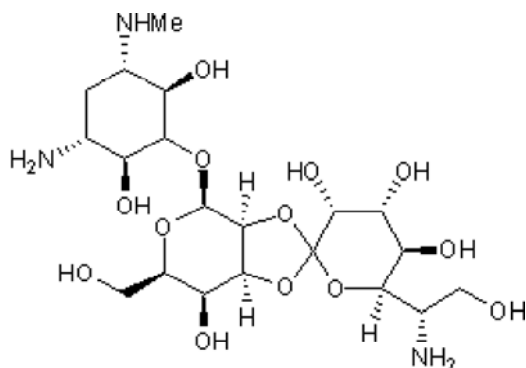
Batch Molecular Formula: C₂₀H₃₇N₃O₁₃

Batch Molecular Weight: 527.52

Physical Appearance: Off-white solid

Minimum Purity: ≥90%

Batch Molecular Structure:



Storage: Store at +4°C. This product is packaged under an inert atmosphere.

Solubility & Usage Info:

water to 100 mM

Hygromycin B is an antibiotic isolated from *Streptomyces hygrosopicus* and has a potency of >1000μ/mg. Aqueous solutions of Hygromycin B may lose activity if frozen but are stable for at least one month at room temperature.

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Ganoza and Kiel (2001) A ribosomal ATPase is a target for hygromycin B inhibition on *Escherichia coli* ribosomes. *Antimicrob. Agents Chemother.* **45** 2813. PMID: 11557474.

Brodersen et al (2000) The structural basis for the action of the antibiotics tetracycline, pactamycin, and hygromycin B on the 30S ribosomal subunit. *Cell* **103** 1143. PMID: 11163189.

Blochlinger and Diggelmann (1984) Hygromycin B phosphotransferase as a selectable marker for DNA transfer experiments with higher eukaryotic cells. *Mol. Cell. Biol.* **4** 2929. PMID: 6098829.

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