

Hygromycin B

Antibiotic for Selection of Transfected Cells

Catalog #03813

100 mg



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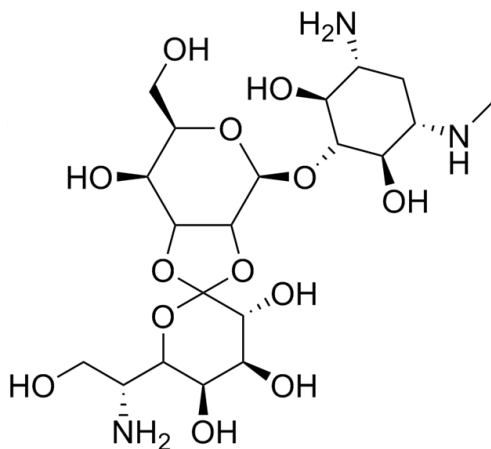
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FOR RESEARCH USE ONLY. NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES.

Product Description

Hygromycin B is an aminoglycoside antibiotic that inhibits protein synthesis and growth of prokaryotic and eukaryotic cells. This antibiotic interferes with translocation of the 70S ribosome subunit and induces misreading of the mRNA template. Resistance to the antibiotic is conferred by hygromycin B phosphotransferase, which phosphorylates and thereby inactivates the antibiotic. Vectors containing the *E. coli* hygromycin B resistance gene (*hyg* or *hph*) have been used for transfecting a wide variety of cells, including bacteria, protozoans, fungi, plants, and mammalian cells, with selection of transfected cells achieved by culturing them in the presence of the antibiotic. Hygromycin B is suitable for use in cell culture for the selection and maintenance of hygromycin-resistant clones when using ClonaCell™-TCS Medium (Catalog #03814), ClonaCell™-CHO CD Medium (Catalog #03815), ClonaCell™-CHO ACF Medium (Catalog #03816), ClonaCell™-CHO CD Liquid Medium (Catalog #03817), or other cell culture media.

Molecule Name:	Hygromycin B
Alternative Names:	E.C. 250-545-5; Hygromix; (3' R,3aS,4S,4' R,5' R,6R,6' R,7S,7aS)-4-[[[(1R,2S,3R,5S,6R)-3-amino-2,6-dihydroxy-5-(methylamino)cyclohexyl]oxy]-6'-[(1S)-1-amino-2-hydroxyethyl]-6-(hydroxymethyl)-tetrahydro-3aH-spiro[[1,3]dioxolo[4,5-c]pyran-2,2'-oxane]-3',4',5',7-tetrol
Chemical 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-streptomine
CAS Number:	31282-04-9
Chemical Formula:	C ₂₀ H ₃₇ N ₃ O ₁₃
Molecular Weight:	527.52 g/mol
Structure:	



Physical Appearance:	White powder. Brown-colored solution when dissolved.
Storage:	Store at 2 - 8°C.
Solubility:	Soluble in water, ethanol, methanol, and buffer solutions.

Please refer to the Safety Data Sheet (SDS) for hazard information.

Handling / Directions for Use

1. Place Hygromycin B powder at room temperature (15 - 25°C) for 30 minutes before use.
2. Dissolve Hygromycin B in 1 mL of distilled water.

NOTE: If not used immediately, solution may be stored at 2 - 8°C for at least 4 weeks. Alternatively, aliquot and store at -20°C. Once aliquots are thawed, do not re-freeze. Solutions should be sterilized by filtration, not by autoclaving.

NOTE: The effective concentration of Hygromycin B needed to kill cells varies by cell type. Typical concentrations used for mammalian cell selection are 0.05 - 1 mg/mL; the optimal concentration must be determined for each cell type.

For more information, refer to the Technical Manual: Semi-Solid Cloning Testing Guidelines - ClonaCell™-CHO (Document #28096), available on our website at www.stemcell.com or contact us to request a copy.

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