



H397 Hygromycin B

Synonyms: 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
 CAS: 31282-04-9
 Formula: C₂₀H₃₇N₃O₁₃
 Mol. Weight: 527.5

Properties

Form: Powder
 Appearance: White to Yellow Powder
 Application: Plant Tissue Culture Selection Agent
 Solubility: Water, Buffer, or Other Aqueous Solution as Required
 Storage Temp: 2 to 6 °C
 Stock Solution: 2 to 6 °C; Do Not Freeze.
 Storage Temp:
 Typical Working Concentration: 20-200 µg/mL for plant cells
 200-1000 µg/mL for fungi
 The optimum concentration for each specific application should be determined experimentally
 Other Notes: Average Activity: 1000 units/mg

Application Notes

Hygromycin B is an aminoglycoside antibiotic derived from *Streptomyces hygroscopicus* that is effective against bacteria, fungi, and higher eukaryotic cells. Unlike other aminoglycoside, hygromycin B is more potent because it contains a hydroxyl function at C-6' position rather than an amino function.² It inhibits polypeptide synthesis and translocation of mRNA and tRNAs of the bacteria ribosome.^{3,4} It is often used in molecular biology as a selection agent.^{5,6}

Please Note: It is the sole responsibility of the purchaser to determine the appropriateness of this product for the specific plants that are being cultured and applications that are being used.

References

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3. Borovinskaya, Maria A, Shinichiro Shoji, Kurt Fredrick, and Jamie H.D. Cate. 2008. Structural basis for hygromycin B inhibition of protein biosynthesis. *RNA.* Vol 14. Pp. 1590-1599.
4. Ditlev E. Brodersen, William M. Clemons, Jr., Andrew P. Carter, Robert J. Morgan-Warren, Brian T. Wimberly, and V. Ramakrishnan. 2000. The Structural Basis for the Action of the Antibiotics Tetracycline, Pactamycin, and Hygromycin B on the 30S Ribosomal Subunit. *Cell.* Vol 103. Pp. 1143-1154.
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