



Spectral Data - Hygromycin B[®]
Hygromycin B, EvoPure[®]
PRODUCT DATA SHEET
issue date 10/17/2017

Product Name: Hygromycin B, EvoPure[®]
Product Number: H010
CAS Number: 31282-04-9
Molecular Formula: C₂₀H₃₇N₃O₁₃
Molecular Weight: 527.52
Form: Powder
Appearance: Off-white to tan powder
Solubility: Water: Freely Soluble
Source: *Streptomyces Hygroscopicus*
Water Content (Karl Fisher): ≤15%
Melting Point: 160-180°C
Storage Conditions: 2-8°C

Description: Hygromycin B, EvoPure[®] is a high purity (>99.0%) form of hygromycin B. Hygromycin B is a unique aminoglycoside antibiotic derived from *Streptomyces hygroscopicus* and is routinely used as a selective agent in cell culture or microbiology applications to isolate hygromycin B resistant cells after transfection or transformation, respectively.

Custom Manufacturing and Testing: TOKU-E Company is able to perform specific tests beyond standard specifications including endotoxin content, arsenic content, cell line testing, spectral analysis, and more. TOKU-E Company has custom manufacturing capabilities and is able to produce custom grade hygromycin B suitable for use in nearly all cell culture applications including use as an ancillary material for upstream pharmaceutical manufacturing. For more information, please [contact us](#).

This product is considered a dangerous good. Quantities above 1 g may be subject to additional shipping fees. Please contact us for specific questions.

For more hygromycin B products, [click here](#).

For more information on hygromycin B, EvoPure[®], [click here](#).

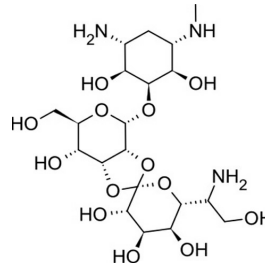
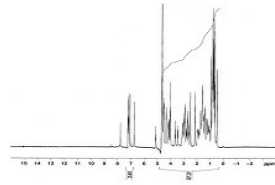
Mechanism of Action: Hygromycin B inhibits protein synthesis by strengthening the interaction of tRNA binding in the ribosomal A-site. Hygromycin B also prevents mRNA and tRNA translocation by an unknown mechanism. These are unique mechanisms for an aminoglycoside antibiotic and they differ from the mode of action neomycin, gentamicin, and G418.

Spectrum: Hygromycin B is effective against eukaryotic and prokaryotic cells.

Microbiology Applications Hygromycin B can be used as a selection agent to isolate hygromycin b resistant bacteria and fungi.

Technical Data:

HNMR Spectra



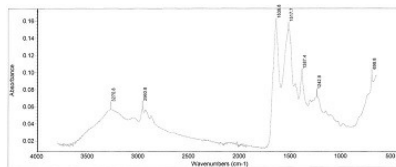
[Click to enlarge](#)

Solvent: D2O

Instrument: Mercury 300

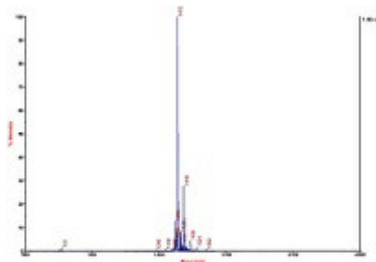
Frequency: 300 MHz

FTIR Spectra



[Click to enlarge](#)

Mass Spectra



[Click to enlarge](#)

Polarity/Scan Type: Positive

Solvent: Water

Solution Concentration: 10 mg/mL

References:

Dai S., Zheng P., Marmey P., Zhang S., Tian W., Chen S., Beachy R.N. and Fauquet C. Comparative analysis of transgenic rice plants obtained by Agrobacterium-mediated transformation and particle bombardment. *Molecular Breeding* 7: 25–33, 2001. © 2001 Kluwer Academic Publishers.

Schindler, D. "Studies on the Mode of Action of Hygromycin B, an Inhibitor of Translocation in Eukaryotes." *Nucleic Acids and Protein Synthesis* 521.2 (1978): 459-69. www.ncbi.gov. Web. 6 Sept. 2012.

If you need any help, contact us: info@toku-e.com. Find more information on: www.toku-e.com/