

# Hygromycin B, EvoPure<sup>®</sup> Solution (100 mg/ml) PRODUCT DATA SHEET

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<b>Product Name:</b>	Hygromycin B, EvoPure <sup>®</sup> Solution (100 mg/ml)
<b>Product Number:</b>	H015
<b>CAS Number:</b>	31282-04-9
<b>Molecular Formula:</b>	C <sub>20</sub> H <sub>37</sub> N <sub>3</sub> O <sub>13</sub>
<b>Molecular Weight:</b>	527.52 g/mol
<b>Form:</b>	Solution
<b>Solubility:</b>	Solution
<b>Source:</b>	<i>Streptomyces Hygroscopicus</i>
<b>Boiling Point:</b>	897.6 °C
<b>Melting Point:</b>	160-180 °C
<b>Flash Point:</b>	496.7 °C
<b>Storage Conditions:</b>	2-8 °C
<b>Description:</b>	<p>Hygromycin B is an aminoglycoside antibiotic which targets both prokaryotic and eukaryotic cells.</p> <p>TOKU-E offers five forms of hygromycin B: <u>hygromycin B (H007)</u>, <u>hygromycin B, EvoPure<sup>®</sup> (H010)</u>, <u>hygromycin B solution (H011)</u>, <u>hygromycin B, EvoPure<sup>®</sup> solution (H015)</u>, and <u>hygromycin B, concentrated solution (H001)</u>.</p> <p>Hygromycin B (H007) and hygromycin B, EvoPure<sup>®</sup> (H010) are both freely soluble in aqueous solution. Hygromycin B solution (H011) is prepared at 50 mg/mL in PBS buffer. Hygromycin B, EvoPure<sup>®</sup> solution (H015) is prepared at 100 mg/mL. Hygromycin B, concentrated solution (H001) is prepared at 450,000 U/mL. EvoPure<sup>®</sup> products are purified single antibiotic fractions, most &gt;99% pure.</p>
<b>Mechanism:</b>	<p>Toxicity of hygromycin B is thought to arise from inhibiting protein synthesis by strengthening the interaction of peptidyl-tRNA in the ribosomal acceptor ("A") site preventing translocation by EF-2 (elongation factor 2).</p>
<b>Plant Biology Applications</b>	<p>The toxicity of Hygromycin B and the availability of a selection marker (npt II) makes this antibiotic applicable as gene selection agent. This transformation system was successfully used by Dai and co-workers in rice (2001).</p>
<b>Technical Data:</b>	<p>HPLC, NMR, FTIR, and MS analysis may be available. For more info, please</p>

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**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](http://www.ncbi.gov). Web. 6 Sept. 2012.