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| <b>Product Name:</b>             | Hygromycin B Solution (50 mg/ml in PBS Buffer)   |
| <b>Product Number:</b>           | H011   |
| <b>CAS Number:</b>               | 31282-04-9   |
| <b>Molecular Formula:</b>        | $C_{20}H_{37}N_3O_{13}$  |
| <b>Molecular Weight:</b>         | 527.52   |
| <b>Form:</b>                     | Solution (sterile)   |
| <b>Appearance:</b>               | Clear and yellowish solution   |
| <b>Source:</b>                   | Biosynthetic: produced by <i>Streptomyces hygroscopicus</i> .  |
| <b>Storage Conditions:</b>       | 2-8°C  |
| <b>Description:</b>              | <p>Hygromycin B is a unique aminoglycoside antibiotic derived from <i>Streptomyces hygroscopicus</i>. Hygromycin B solution is routinely used as a selective agent in cell culture or microbiology applications to isolate hygromycin B resistant cells.</p> <p>This product is packaged as a solution at a concentration of 50 mg/mL in PBS buffer.</p> <p>This product is considered a dangerous good. Quantities above 1 g may be subject to additional shipping fees. Please contact us for specific questions.</p> <p>For more hygromycin B products, <a href="#">click here</a>.</p> <p>For more information on hygromycin B, EvoPure<sup>®</sup>, <a href="#">click here</a>.</p> |
| <b>Mechanism of Action:</b>      | 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.   |
| <b>Spectrum:</b>                 | Hygromycin B is effective against eukaryotic and prokaryotic cells.  |
| <b>Microbiology Applications</b> | Hygromycin B can be used as a selection agent to isolate hygromycin b resistant bacteria and fungi.  |
| <b>References:</b>               | <p>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. <i>Molecular Breeding</i> 7: 25–33, 2001. © 2001 Kluwer Academic Publishers.</p> <p>Schindler, D. "Studies on the Mode of Action of Hygromycin B, an Inhibitor of Translocation in Eukaryotes." <i>Nucleic Acids and Protein Synthesis</i> 521.2 (1978): 459-69. <a href="http://www.ncbi.gov">www.ncbi.gov</a>. Web. 6 Sept. 2012.</p>  |

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