

## Hygromycin B, 1G

PG-706-1G

Hygromycin B is a broad-spectrum aminoglycoside antibiotic produced by *Streptomyces hygroscopicus*. It inhibits protein synthesis by interfering with ribosomal translocation and is widely used as a selective agent in molecular biology, cell biology, and genetic engineering for the selection and maintenance of transformed prokaryotic and eukaryotic cells carrying the hygromycin resistance gene.

|                               | Details                                                                                                                                                                         |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Name</b>           | Hygromycin B                                                                                                                                                                    |
| <b>Quantity</b>               | 1 g                                                                                                                                                                             |
| <b>Description</b>            | Broad-spectrum aminoglycoside antibiotic used for selection of genetically engineered cells containing the hygromycin resistance gene.                                          |
| <b>Molecular Formula</b>      | $C_{20}H_{37}N_3O_{13}$                                                                                                                                                         |
| <b>Molecular Weight</b>       | 527.52 g/mol                                                                                                                                                                    |
| <b>Appearance</b>             | White to off-white powder                                                                                                                                                       |
| <b>Purity</b>                 | ≥90% (typical, depending on grade)                                                                                                                                              |
| <b>CAS Number</b>             | 31282-04-9                                                                                                                                                                      |
| <b>Solubility</b>             | Freely soluble in water                                                                                                                                                         |
| <b>pH (50 mg/mL in Water)</b> | 7.0 – 9.5                                                                                                                                                                       |
| <b>Storage Condition</b>      | Store at 2–8°C in a tightly closed container, protected from moisture                                                                                                           |
| <b>Shelf Life</b>             | Refer to product label                                                                                                                                                          |
| <b>Grade</b>                  | Molecular Biology Grade                                                                                                                                                         |
| <b>Applications / Uses</b>    | Selection of stable transfected mammalian cells, plant transformation studies, bacterial and fungal selection, genetic engineering, molecular biology and cell culture research |
| <b>Safety</b>                 |                                                                                                                                                                                 |

Harmful if swallowed, inhaled, or absorbed through the skin. Avoid contact with eyes, skin, and clothing. Use appropriate PPE including gloves, lab coat, and safety goggles. Handle powders carefully to minimize dust formation. Follow institutional safety guidelines for handling antibiotics.