

Hygromycin B

20ml

800元

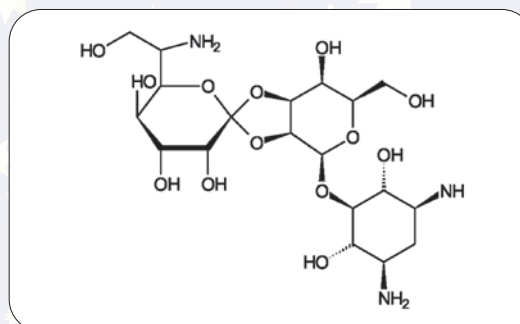
Formulation: 50 mg/ml in PBS (phosphate buffered saline), sterile filtered.

Molecular weight: 527.5

Formula: $C_{20}H_{37}N_3O_{13}$

CAS: 31282-04-9

Purity: 80% (HPLC)



Application

Hygromycin B is used for the selection of pro- and eukaryotic cells, stably transfected with the Hygromycin resistance gene, as well as for the maintenance of the Hygromycin phenotype of resistant cells.

Working concentration

Recommended concentration for the selection of resistant cells is 50 –1000 $\mu\text{g/ml}$. The optimal concentration is to be tested experimentally and may vary with the cell type. A commonly used concentration for selection of mammalian cells is 200 $\mu\text{g/ml}$.

Stability

The solution is stable at +2 to +8 $^{\circ}\text{C}$ through the expiration date printed on the label. Not stored in -20 $^{\circ}\text{C}$.

Action

Hygromycin B is an aminoglycosidic antibiotic produced by *Streptomyces hygroscopicus* that kills bacteria, fungi and higher eukaryotic cells by inhibiting protein synthesis. It has been reported to interfere with translocation and to cause mistranslation.

Resistance

A gene has been identified that confers resistance in *E. coli* against Hygromycin B. The resistance gene codes for kinase that inactivates Hygromycin B through phosphorylation (Hygromycin B phosphotransferase). Cloning of the resistance gene (designated HM^+ , HMR, hyg or hph) and fusion with eukaryotic promoters has resulted in the construction of vectors that allow selection for resistance to Hygromycin B in both prokaryotic and eukaryotic cell systems.