

# Hygromycin B

## Catalog No: tcsc2609



### Available Sizes

**Size:** 200mg

**Size:** 500mg

**Size:** 1g

**Size:** 5g



### Specifications

**CAS No:**

31282-04-9

**Formula:**

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

**Pathway:**

Anti-infection;Anti-infection

**Target:**

Fungal;Bacterial

**Purity / Grade:**

>98%

**Solubility:**

H<sub>2</sub>O : ≥ 30 mg/mL (56.87 mM)

**Alternative Names:**

Hygrovetine

**Observed Molecular Weight:**

527.52

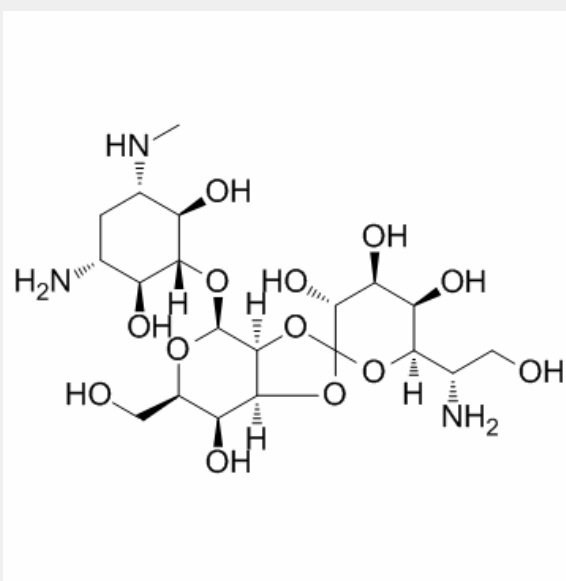
## Product Description

Hygromycin B is an aminoglycoside antibiotic active against prokaryotic and eukaryotic cells.

IC50 & Target: Target Antibacterial; Antifungal<sup>[1]</sup>

***In Vitro:*** Hygromycin B, an aminocyclitol antibiotic that strongly inhibits both 70S and 80S ribosomes, is synthesized by *Streptomyces hygroscopicus*<sup>[1]</sup>. Hygromycin B at 0.38 mM concentration completely halts yeast cell growth in rich media, presumably by preventing protein synthesis by cytoplasmic ribosomes. Polypeptide synthesis in cell-free extracts from rabbit reticulocytes, wheat germ and yeast is strongly blocked by low concentrations of hygromycin B. The antibiotic inhibits peptide chain elongation by yeast polysomes by preventing elongation factor EF-2-dependent translocation. The inhibition of translocation by hygromycin B might result from the stabilization of peptidyl-tRNA bound to the ribosomal acceptor site<sup>[2]</sup>.

***In Vivo:*** Hygromycin B inhibits protein synthesis by blocking ribosomal translocation without causing significant misreading *in vivo*<sup>[3]</sup>. Constitutive expression of the bacterial *hyg*<sup>R</sup> gene in transgenic mice *in vivo* confers resistance to hygromycin B<sup>[4]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!