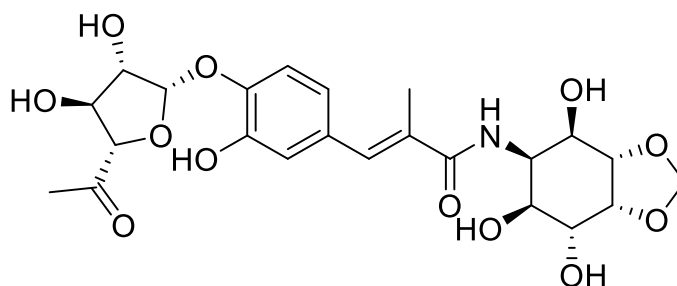


Hygromycin A

Code No.: **BIA-H2937**

Pack sizes: **0.5 mg, 2.5 mg**



Synonyms : Homomycin, (-)-Hygromycin A, 1703-18B, Antibiotic WS 1627B, Totomycin, Antibiotic YK 43-2, Antibiotic 51086, Compound 51086, YK 43-2

Specifications

CAS #	: 6379-56-2
Molecular Formula	: C₂₃H₂₉NO₁₂
Molecular Weight	: 511.5
Source	: <i>Streptomyces hygroscopicus</i>
Appearance	: White to off-white solid
Purity	: >95% by HPLC
Long Term Storage	: -20°C
Solubility	: Soluble in ethanol, methanol, DMF or DMSO.

Application Notes

Hygromycin A is a neutral aminoglycoside produced by *Streptomyces hygroscopicus*, reported by researchers at Eli Lilly in the early 1950s. The much rarer hygromycin A is structurally unrelated to hygromycin B and the metabolites display quite different biological profiles. Hygromycin A inhibits bacterial ribosomal peptidyl transferase, binding to the ribosome in a distinct but overlapping manner with other antibiotics. Hygromycin A is active against Gram positive and Gram negative bacteria, including Mycobacteria, Leptospira and Treponema. Hygromycin A has immunosuppressant and anthelmintic activity. Most recently, hygromycin A has been reported as having unexpectedly specific activity against *Borrelia burgdorferi*, the causative agent of Lyme disease.

References

1. Hygromycin. I. Preliminary studies on the production and biologic activity of a new antibiotic. Pittenger R.C. et al. *Antibiot Chemother* 1953, 3, 1268.
2. Hygromycin A, an antitreponemal substance. I. Screening method and therapeutic effect for *Treponema hyodysenteriae*-caused infection in CF-1 mice. Omura S. et al. *J Antibiot* 1987, 40, 1619.
3. Pentalenolactone I and hygromycin A, immunosuppressants produced by *Streptomyces filipinensis* and *Streptomyces hygroscopicus*. Uyeda M. et al. *Biosci Biotech Biochem* 2001, 65, 1252.
4. A selective antibiotic for Lyme disease. Leimer N. et al. *Cell* 2021, 184, 5405.