



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!  
See the following pages for more information!



### Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC Handels GmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

[mail@szabo-scandic.com](mailto:mail@szabo-scandic.com)

[www.szabo-scandic.com](http://www.szabo-scandic.com)

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 

# PRODUCT INFORMATION



## Hygromycin B-d<sub>4</sub>

Item No. 34443

**Formal Name:** (3R,3a'S,4S,4'S,5R,6R,6'R,7'S,7a'S)-4'-(((1R,2S,3R,5S,6R)-3-amino-2,6-dihydroxy-5-(methylamino)cyclohexyloxy)-6-((S)-1-amino-2-hydroxyethyl)-6'-(hydroxymethyl)octahydro-4'H-spiro[pyran-2,2'-[1,3]dioxolo[4,5-c]pyran]-3,4,5,7'-tetraol

**MF:** C<sub>20</sub>H<sub>33</sub>D<sub>4</sub>N<sub>3</sub>O<sub>13</sub>

**FW:** 531.5

**Chemical Purity:** ≥95% (Hygromycin B)

**Deuterium**

**Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>4</sub>); ≤1% d<sub>0</sub>

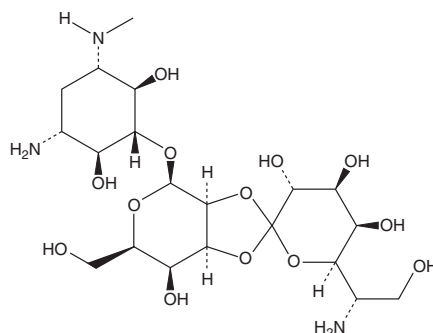
**Supplied as:** A solid

**Storage:** -20°C

**Stability:** ≥2 years

**Item Origin:** Synthetic

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



NOTE: Deuterium location unspecified

## Laboratory Procedures

Hygromycin B-d<sub>4</sub> is intended for use as an internal standard for the quantification of hygromycin B (Item No. 14291) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Hygromycin B-d<sub>4</sub> is supplied as a solid. A stock solution may be made by dissolving the hygromycin B-d<sub>4</sub> in the solvent of choice, which should be purged with an inert gas. Hygromycin B-d<sub>4</sub> is slightly soluble in methanol and water (sonicated).

## Description

Hygromycin B is an aminoglycoside antibiotic that has been found in *S. hygroscopicus*.<sup>1,2</sup> It is active against *E. coli* (MIC = 150 µg/ml) and cytotoxic to both prokaryotic and eukaryotic cells *via* inhibition of protein synthesis.<sup>3-5</sup> Hygromycin B has commonly been used in molecular and cell biology applications to select for transformed cells expressing the *E. coli* hygromycin resistance genes *hyg* or *hph*.<sup>4,5</sup>

## References

1. Eustice, D.C. and Wilhelm, J.M. Mechanisms of action of aminoglycoside antibiotics in eucaryotic protein synthesis. *Antimicrob. Agents Chemother.* **26**(1), 53-60 (1984).
2. Cabañas, M.J., Vázquez, D., and Modolell, J. Dual interference of hygromycin B with ribosomal translocation and with aminoacyl-tRNA recognition. *Eur. J. Biochem.* **87**(1), 21-27 (1978).
3. McGaha, S.M. and Champney, W.S. Hygromycin B inhibition of protein synthesis and ribosome biogenesis in *Escherichia coli*. *Antimicrob. Agents Chemother.* **51**(2), 591-596 (2006).
4. Kaster, K.R., Burgett, S.G., Rao, R.N., *et al.* Analysis of a bacterial hygromycin B resistance gene by transcriptional and translational fusions and by DNA sequencing. *Nucleic Acids Res.* **11**(19), 6895-6911 (1983).
5. Blochliger, K. and Diggelmann, H. Hygromycin B phosphotransferase as a selectable marker for DNA transfer experiments with higher eucaryotic cells. *Mol. Cell Biol.* **4**(12), 2929-2931 (1984).

### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 06/24/2021

## CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM