

PRODUCT INFORMATION



Hygrolidin

Item No. 28116

CAS Registry No.: 83329-73-1

Formal Name: 2E-butenedioic acid, mono[(2R,4R,5S,6R)-6-ethyltetrahydro-2-hydroxy-2-[(1S,2R,3S)-2-hydroxy-3-[(2R,3S,4E,6E,9S,10S,11R,12E,14E)-10-hydroxy-3-methoxy-7,9,11,13,15-pentamethyl-16-oxooxacyclohexadeca-4,6,12,14-tetraen-2-yl]-1-methylbutyl]-5-methyl-2H-pyran-4-yl] ester

Synonym: Antibiotic 1166C

MF: $C_{38}H_{58}O_{11}$

FW: 690.9

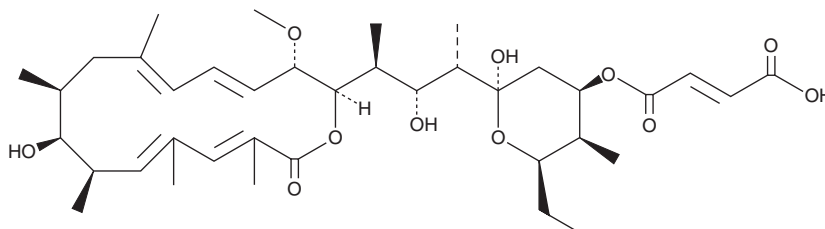
Purity: $\geq 95\%$

Supplied as: A solid

Storage: -20°C

Stability: ≥ 4 years

Item Origin: Bacterium/*Streptomyces* sp.



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

Laboratory Procedures

Hygrolidin is supplied as a solid. A stock solution may be made by dissolving the hygrolidin in the solvent of choice. Hygrolidin is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

Hygrolidin is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Hygrolidin is a macrocyclic lactone originally isolated from *S. hygroscopicus*.¹ It inhibits proliferation of a variety of cancer cell lines, including DLD-1 colon cancer, LNCaP prostate cancer, and K562 leukemia cells (IC_{50} s = 2.9, 5.2, and 33 ng/ml, respectively).² Hygrolidin induces the expression and levels of p21 in DLD-1 cells, but not WI-38 fibroblasts, and leads to cell accumulation in the G_1 and S phases without inducing apoptosis. It has antiparasitic activity against *T. cruzi*, *L. donovani*, and *T. b. brucei* but also induces cytotoxicity in HepG2 cells (IC_{50} s = 1.1, 72.5, 77, and 24.5 nM, respectively).³

References

1. Seto, H., Akao, H., Furihata, K., *et al.* The structure of a new antibiotic, hygrolidin. *Tetrahedron Lett.* **23**(26), 2667-2670 (1982).
2. Kawada, M., Usami, I., Ohba, S., *et al.* Hygrolidin induces p21 expression and abrogates cell cycle progression at G1 and S phases. *Biochem. Biophys. Res. Commun.* **298**(1), 178-183 (2002).
3. Annang, F., Pérez-Moreno, G., García-Hernández, R., *et al.* High-throughput screening platform for natural product-based drug discovery against 3 neglected tropical diseases: Human African trypanosomiasis, leishmaniasis, and Chagas disease. *J. Biomol. Screen.* **20**(1), 82-91 (2015).

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.

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