

Product Data Sheet

Product Name: Teleocidin A1

Cat. No.: GC40069

Chemical Properties

Cas. No. 70497-14-2

Chemical Name (2S,5S)-9-[(1R)-1-ethenyl-1,5-dimethyl-4-hexen-1-yl]-1,2,4,5,6,8-hexahydro-5-(hydroxymethyl)-1-methyl-2-(1-methylethyl)-3H-pyrrolo[4,3,2-gh]-1,4-benzodiazonin-3-one

SMILES O=C([C@@H](C(C)C)N1C)N[C@H](CO)CC2=CNC3=C([C@](C=C)(C)CC/C=C(C)/C)C=CC1=C32

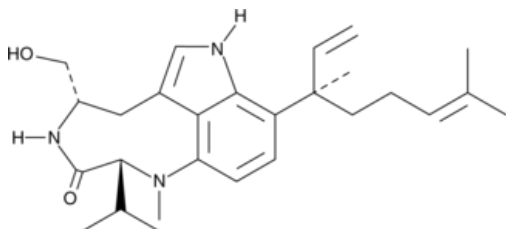
Formula C₂₇H₃₉N₃O₂ M.Wt 437.6

Solubility DMF: Soluble, DMSO: Soluble, Ethanol: Soluble, Methanol: Soluble Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Teleocidin A1, also known as lyngbyatoxin A, is a fungal metabolite that has been isolated from *S. mediocidicus* and is the R enantiomer of (S)-teleocidin A. [1] It acts as a tumor promoter, inducing ornithine decarboxylase activity in mouse skin, increasing adhesion of HL-60 human leukemia cells (ED₅₀ = 7 ng/ml), and inducing tumor formation in 87% of mice after 30 weeks when administered at a dose of 3 µg twice per week. [2] Teleocidin A1 also increases the production of prostaglandins and the turnover of choline in HeLa cells when used at concentrations ranging from 6 to 20 ng/ml. [3] It is a substrate for the methyltransferase TleD in *Streptomyces* where it is converted to teleocidin B. [4]

Caution: Product has not been fully validated for medical applications. For research use only.

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Reference:

- [1]. Sakai, S.-I., Hitotsuyanagi, Y., Aimi, N., et al. Absolute configuration of lyngbyatoxin A (teleocidin A-1) and teleocidin A-2. Tetrahedron Lett. 27(43), 5219-5220 (1986).
- [2]. Fujiki, H., and Sugimura, T. New classes of tumor promoters: Teleocidin, aplysiatoxin, and palytoxin. Adv. Cancer Res. 49, 223-264 (1987).
- [3]. Sakamoto, H., Terada, M., Fujiki, H., et al. Stimulation of prostaglandin production and choline turnover in HeLa cells by lyngbyatoxin A and dihydroteleocidin B. Biochem. Biophys. Res. Commun. 102(1), 100-107 (1981).
- [4]. Yu, F., Li, M., Xu, C., et al. Crystal structure and enantioselectivity of terpene cyclization in SAM-dependent methyltransferase TleD. Biochem. J. 473(23), 4385-4397 (2016).

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