PRODUCT INFORMATION



Teleocidin A1

Item No. 25482

CAS Registry No.:	70497-14-2	
Formal Name:	(2S,5S)-9-[(1R)-1-ethenyl-1,5-dimethyl-	
	4-hexen-1-yl]-1,2,4,5,6,8-hexahydro-	Н
	5-(hydroxymethyl)-1-methyl-2-(1-	
	methylethyl)-3H-pyrrolo[4,3,2-gh]-1,4-	
	benzodiazonin-3-one	
Synonym:	Lyngbyatoxin A	
MF:	$C_{27}H_{30}N_3O_2$	H—N II
FW:	437.6	
Purity:	≥98%	
Supplied as:	A solid	
Storage:	-20°C	
Stability:	≥4 years	

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

Laboratory Procedures

Teleocidin A1 is supplied as a solid. A stock solution may be made by dissolving the teleocidin A1 in the solvent of choice, which should be purged with an inert gas. Teleocidin A1 is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

Teleocidin A1 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

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 $3 \mu g$ 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

References

- 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).

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

SAFFTY 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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