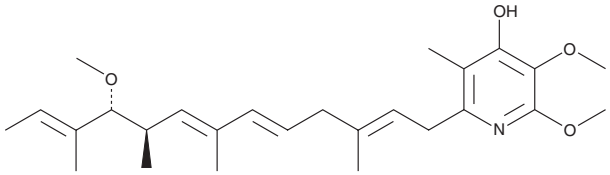
PRODUCT INFORMATION

Piericidin B

Item No. 33721

CAS Registry No.:	16891-54-6
Formal Name:	2,3-dimethoxy-6-[(2E,5E,7E,9R,10R,11E)-10-methoxy-3,7,9,11-tetramethyl-2,5,7,11-tridecatetraen-1-yl]-5-methyl-4-pyridinol
MF:	$C_{26}H_{39}NO_4$
FW:	429.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 239 nm
Supplied as:	A solution in ethanol
Storage:	-20°C
Stability:	≥1 year



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

Laboratory Procedures

Piericidin B is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as methanol, DMSO, and dimethyl formamide purged with an inert gas can be used.

Description

Piericidin B is a bacterial metabolite that has been found in *S. mobaraensis* and has insecticidal and antimicrobial activities.[1-3] It inhibits NADH oxidase activity in isolated bovine heart mitochondria and inhibits respiration in isolated rat liver mitochondria and isolated cockroach (*P. americana*) muscle mitochondria.[2,3] Topical application of piericidin B (4 µg/insect) induces mortality in 87.5% of houseflies (*M. domestica*).[1] It induces 93.3, 100, and 100% mortality in rice stem borer (*C. simples*), silkworm (*B. mori*), and green caterpillar (*P. rapae*) larvae, respectively, when applied at respective concentrations of 60, 4.8, and 96 µg/larva. Piericidin B is active against the fungi *T. asteroides*, *T. rubrum*, M. *gypseum*, and C. *neoforms* (MICs = 20, 10, 20, and 2 µg/ml, respectively), as well as the bacteria *M. luteus* and *P. vulgaris* (MICs = 50 and 100 µg/ml, respectively).

References

1. Takahashi, N., Suzuki, A., Kimura, Y., *et al.* Isolation, structure and physiological activities of piericidin B, natural Insecticide produced by a *Streptomyces*. *Agr. Biol. Chem.* **32(9)**, 1115-1122 (1968).
2. Jeng, M., Hall, C., Crane, F.L., *et al.* Inhibition of mitochondrial electron transport by piericidin A and related compounds. *Biochemistry* **7(4)**, 1311-1322 (1968).
3. Mitsui, T., Fukami, J.-I., Fukunaga, K., *et al.* Studies on piericidin. I. : Effects of piericidin A and B on mitochondrial electron transport in insect muscle comparing with rotenone. *Sci. Insect Control* **34(3)**, 126-134 (1969).

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