

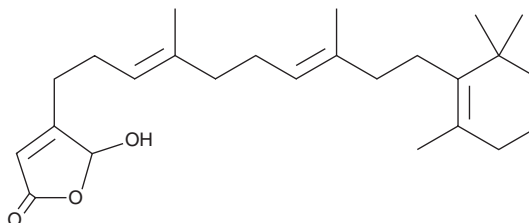
PRODUCT INFORMATION



Luffariellolide

Item No. 14902

CAS Registry No.: 111149-87-2
Formal Name: 4-[(3E,7E)-4,8-dimethyl-10-(2,6,6-trimethyl-1-cyclohexen-1-yl)-3,7-decadien-1-yl]-5-hydroxy-2(5H)-furanone
MF: C₂₅H₃₈O₃
FW: 386.6
Purity: ≥98%
Supplied as: An oil
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Luffariellolide is supplied as an oil. A stock solution may be made by dissolving the luffariellolide in the solvent of choice. Luffariellolide is soluble in organic solvents such as ethanol and DMSO.

Description

Luffariellolide is a natural sesterterpenoid which reversibly inhibits secretory phospholipase A₂ isoforms from bee venom (IC₅₀ = 230 nM) and snake venom, reducing inflammation.¹ It blocks the production of platelet-activating factor in stimulated neutrophils (IC₅₀ = 5 μM).² Luffariellolide is also a structural mimic of all-*trans* retinoic acid (RA) and, at 1 μM, acts as an agonist for the RA receptors RAR α, β, and γ but not for other nuclear receptors.³ In RA-sensitive cancer cell lines, luffariellolide induces the expression of RAR target genes and inhibits cell growth.³ It also inhibits the activation of hypoxia-inducible factor by hypoxia (IC₅₀ = 3.6 μM).⁴

References

1. Calhoun, W., Yu, J., Sung, A., *et al.* Pharmacologic modulation of D-49 phospholipase A₂-induced paw edema in the mouse. *Agents Actions* **27(3-4)**, 418-421 (1989).
2. Glaser, K.B., Lock, Y.W., and Chang, J.Y. PAF and LTB₄ biosynthesis in the human neutrophil: Effects of putative inhibitors of phospholipase A₂ and specific inhibitors of 5-lipoxygenase. *Agents Actions* **34(1-2)**, 89-92 (1991).
3. Wang, S., Wang, Z., Lin, S., *et al.* Revealing a natural marine product as a novel agonist for retinoic acid receptors with a unique binding mode and inhibitory effects on cancer cells. *Biochem. J.* **446(1)**, 79-87 (2012).
4. Li, J., Du, L., Kelly, M., *et al.* Structures and potential antitumor activity of sesterterpenes from the marine sponge *Hyrtios communis*. *J. Nat. Prod.* **76(8)**, (2013)

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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