

PRODUCT INFORMATION

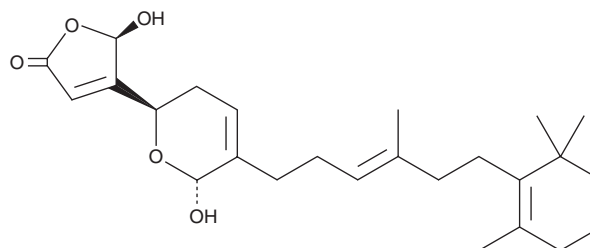


Manoalide

Item No. 14903

CAS Registry No.: 75088-80-1
Formal Name: (5R)-4-[(2R,6R)-3,6-dihydro-6-hydroxy-5-[(3E)-4-methyl-6-(2,6,6-trimethyl-1-cyclohexen-1-yl)-3-hexen-1-yl]-2H-pyran-2-yl]-5-hydroxy-2(5H)-furanone

MF: C₂₅H₃₆O₅
FW: 416.6
Purity: ≥98%
Supplied as: A film
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Manoalide is supplied as a film. A stock solution may be made by dissolving the manoalide in the solvent of choice. Manoalide is soluble in organic solvents such as ethanol and DMSO, which should be purged with an inert gas. The solubility of manoalide in these solvents is approximately 25 mg/ml.

Description

Manoalide is a natural sesterterpenoid which irreversibly inhibits secretory phospholipase A₂ isoforms from human synovium, bee venom, and cobra venom (IC₅₀ values are 3.9, 7.5, and 2 μM, respectively).^{1,2} It also potently blocks calcium channels (IC₅₀ = 1 μM) and inhibits phospholipase C (IC₅₀ = 1.5 μM).^{3,4,5} Manoalide can be used in biochemical, cellular, and *in vivo* experiments.^{6,7,8}

References

1. Randazzo, A., Debitus, C., Minale, L., *et al.* Petrosaspongiolides M-R: New potent and selective phospholipase A₂ inhibitors from the new caledonian marine sponge *Petrosaspongia nigra*. *J. Nat. Prod.* **61(5)**, 571-575 (1998).
2. De Rosa, M., Giordano, S., Scettri, A., *et al.* Synthesis and comparison of the antiinflammatory activity of manoalide and cacospongionolide B analogues. *J. Med. Chem.* **41(17)**, 3232-3238 (1998).
3. Wheeler, L.A., Sachs, G., De Vries, G., *et al.* Manoalide, a natural sesterterpenoid that inhibits calcium channels. *J. Biol. Chem.* **262(14)**, 6531-6538 (1987).
4. Muallem, S., Loessberg, P., Sachs, G., *et al.* Agonist-sensitive and -insensitive intracellular Ca²⁺ pools. Separate Ca²⁺-releasing mechanisms revealed by manoalide and benzohydroquinone. *Biochem J.* **279(2)**, 367-375 (2013).
5. Bennett, C.F., Mong, S., Wu, H.L., *et al.* Inhibition of phosphoinositide-specific phospholipase C by manoalide. *Mol. Pharmacol.* **32(5)**, 587-593 (1987).
6. Jacobson, P.B., Marshall, L.A., Sung, A., *et al.* Inactivation of human synovial fluid phospholipase A₂ by the marine natural product, manoalide. *Biochem. Pharmacol.* **39(10)**, 1557-1564 (1990).
7. Lister, M.D., Glaser, K.B., Ulevitch, R.J., *et al.* Inhibition studies on the membrane-associated phospholipase A₂ *in vitro* and prostaglandin E₂ production *in vivo* of the macrophage-like P388D1 cell. Effects of manoalide, 7,7-dimethyl-5,8-eicosadienoic acid, and p-bromophenacyl bromide. *J. Biol. Chem.* **264(15)**, 8520-8528 (1989).
8. Payá, M., Terencio, M.C., Ferrándiz, M.L., *et al.* Involvement of secretory phospholipase A₂ activity in the zymosan rat air pouch model of inflammation. *Br. J. Pharmacol.* **117(8)**, 1773-1779 (1996).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 02/21/2018

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM