

PRODUCT INFORMATION



Pyripyropene A

Item No. 11896

CAS Registry No.: 147444-03-9
Formal Name: 3,6-bis(acetyloxy)-4-[(acetyloxy)methyl]-1,3S,4R,4aR,5,6S,6a,12,12aS,12bS-decahydro-12-hydroxy-4,6a,12b-trimethyl-9-(3-pyridinyl)-2H,11H-naphtho[2,1-b]pyrano[3,4-e]pyran-11-one

Synonyms: FO-1289A, PPPA

MF: C₃₁H₃₇NO₁₀

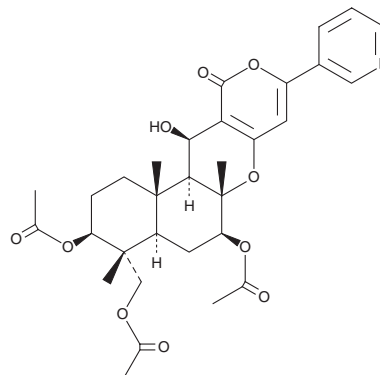
FW: 583.6

Purity: ≥95%

Supplied as: A crystalline 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

Pyripyropene A (PPPA) is supplied as a crystalline solid. A stock solution may be made by dissolving the PPPA in the solvent of choice. PPPA is soluble in organic solvents such as methanol, DMSO, chloroform, and ethyl acetate, which should be purged with an inert gas. It is insoluble in water and hexane. We do not recommend storing the aqueous solution for more than one day.

Description

Acyl-CoA: cholesterol acyltransferase (ACAT) is a key enzyme for cholesteryl ester accumulation in atherogenesis, lipoprotein formation in liver, and cholesterol absorption from intestines, all of which are events that contribute to the atherosclerotic process.^{1,2} Two ACAT isozymes have been identified and are expressed in distinct tissues. ACAT1 is ubiquitously expressed at a high level in sebaceous glands, steroidogenic tissues, and macrophages, whereas ACAT2 is expressed predominantly in the liver and intestine.³ PPPA, naturally produced by *A. fumigates*, is a potent inhibitor of ACAT2 with an IC₅₀ value of 70 nM in an *in vitro* activity assay.⁴⁻⁶ It demonstrates high selectivity for the ACAT2 isozyme, inhibiting ACAT1 in a similar assay with an IC₅₀ value of > 80 μM.⁶ A dose of 10 to 100 mg/kg PPPA inhibits cholesterol absorption in mouse intestine by 30.5 -55%.⁶ Oral administration to apolipoprotein E-knockout mice at 10-50 mg/kg per day for 12 weeks can lower the levels of plasma cholesterol and hepatic cholesterol, very-low-density lipoprotein, and LDL content, resulting in protection from atherosclerosis development.⁶

References

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2. Nissen, S.E., Tuzcu, E.M., Brewer, H.B., et al. *N. Engl. J. Med.* **354(12)**, 1253-1263 (2006).
3. Anderson, R.A., Joyce, C., Davis, M., et al. *J. Biol. Chem.* **273(41)**, 26747-26754 (1998).
4. Omura, S., Tomoda, H., Kim, Y.K., et al. *J. Antibiot.* **46(7)**, 1168-1169 (1993).
5. Tomoda, H., Kim, Y.K., Nishida, H., et al. *J. Antibiot.* **47(2)**, 148-153 (1994).
6. Ohshiro, T., Matsuda, D., Sakai, K., et al. *Arterioscler. Thromb. Vasc. Biol.* **31(5)**, 1108-1115 (2011).

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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