

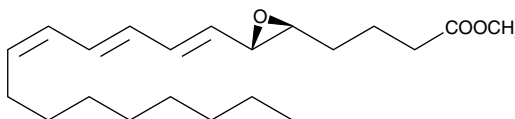
Product Information



Leukotriene A₃ methyl ester

Item No. 20009

CAS Registry No.: 83851-38-1
Formal Name: 5S-trans-5,6-oxido-7E,9E,11Z-eicosatrienoic acid, methyl ester
Synonym: LTA₃ methyl ester
MF: C₂₁H₃₄O₃
FW: 334.5
Purity: ≥97%
Stability: ≥1 year at -80°C
Supplied as: A solution in hexane/1% triethylamine
UV/Vis.: λ_{max}: 279 nm ε: 49,000
Miscellaneous: Light Sensitive



Laboratory Procedures

For long term storage, we suggest that leukotriene A₃ methyl ester (LTA₃ methyl ester) be stored as supplied at -80°C. It should be stable for at least one year.

LTA₃ methyl ester is supplied as a solution in hexane containing 1% triethylamine. The naturally occurring free acid of LTA₃ is too unstable for storage. The methyl ester is provided because of its increased stability. However, both the free acid and the methyl ester decompose rapidly under acidic conditions. Before performing any biological experiments, LTA₃ methyl ester should be hydrolyzed to LTA₃. Alkaline hydrolysis of LTA₃ methyl ester can be performed as follows:

Prepare a hydrolysis solution consisting of degassed acetone (8 ml) and 0.25 M NaOH (2 ml) and cool it to 0°C. Evaporate the hexane solution of LTA₃ methyl ester just to dryness under nitrogen and immediately add 4 ml of the hydrolysis solution per 1 mg of LTA₃ methyl ester (e.g., 400 µl per 100 µg vial). Allow the reaction to stand under an inert atmosphere of nitrogen or argon at 22°C for 40 minutes. The resulting basic solution of LTA₃ will be stable for about 60 minutes at room temperature or for 12 hours at 0°C. Dilutions of this LTA₃ stock solution can be made directly into aqueous buffers. Incorporation of albumin in the buffers will increase the stability of LTA₃ in aqueous media. Solutions not used within 12 hours of hydrolysis should be discarded.

Biosynthesis of LTA₃ occurs from 5,8,11-eicosatrienoic acid *via* the 5-lipoxygenase pathway¹ and this is the putative intermediate in the biosynthesis of 3-series LTs. LTA₃ as a free acid is highly unstable. The methyl ester is stable and can be readily hydrolyzed to the free acid as needed.

Reference

1. Jakschik, B.A., Morrison, A.R., and Sprecher, H. Products derived from 5,8,11-eicosatrienoic acid by the 5-lipoxygenase-leukotriene pathway. *J. Biol. Chem.* 258, 12797-12800 (1983).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/20009

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent *via* email to your institution.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com