

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%
UV/Vis.: λ_{max}: 279 nm
Supplied as: A solution in hexane/1% triethylamine
Storage: -80°C
Stability: ≥1 year
Special Conditions: Light sensitive



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

Laboratory Procedures

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.

Description

Leukotriene A₃ (LTA₃) methyl ester is an esterified form of LTA₃. It has been used in the synthesis of LTC₄ (Item No. 20210) derivatives with smooth muscle contractile activity.¹

Reference

1. Okuyama, S., Miyamoto, S., Shimoji, K., *et al.* Structural analogs of leukotrienes C and D and their contractile activities. *Chem. Pharm. Bull. (Tokyo)* **30(7)**, 2453-2462 (1982).

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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