

## Produktinformation



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# Product Information



## Leukotriene A<sub>3</sub> methyl ester

Item No. 20009

CAS Registry No.: 83851-38-1

5S-trans-5,6-oxido-7E,9E,11Z-Formal Name:

eicosatrienoic acid, methyl ester

Synonym: LTA<sub>3</sub> methyl ester

MF:  $C_{21}H_{34}O_{3}$ FW: 334.5 **Purity:** ≥97%

Stability: ≥1 year at -80°C

Supplied as: A solution in hexane/1% triethylamine

λ<sub>max</sub>: 279 nm ε: 49,000 UV/Vis.:

Miscellaneous: Light Sensitive

# COOCH<sub>2</sub>

#### **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.

LTA<sub>3</sub> methyl ester is supplied as a solution in hexane containing 1% triethylamine. The naturally occurring free acid of LTA<sub>3</sub> 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 LTA<sub>3</sub> methyl ester just to dryness under nitrogen and immediately add 4 ml of the hydrolysis solution per 1 mg of LTA<sub>3</sub> 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 LTA<sub>3</sub> occurs from 5,8,11-eicosatrienoic acid via the 5-lipoxygenase pathway<sup>1</sup> 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

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