

PRODUCT INFORMATION



Leukotriene C₄ methyl ester

Item No. 10007164

CAS Registry No.: 73958-10-8
Formal Name: 5S-hydroxy-6R-(S-glutathionyl)-7E,9E,11Z,14Z-eicosatetraenoic acid, methyl ester

Synonym: LTC₄ methyl ester

MF: C₃₁H₄₉N₃O₉S

FW: 639.8

Purity: ≥97%

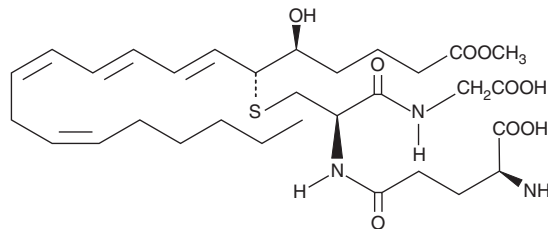
UV/Vis.: λ_{max}: 280 nm

Supplied as: A solution in ethanol

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

Leukotriene C₄ methyl ester (LTC₄ methyl ester) is supplied as a solution in ethanol. To change the solvent, simply evaporate the ethanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of LTC₄ methyl ester in these solvents is approximately 50 mg/ml.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. If an organic solvent-free solution of LTC₄ methyl ester is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of LTC₄ methyl ester in PBS (pH 7.2) is approximately 0.15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

LTC₄ is the parent cysteinyl-leukotriene produced by the LTC₄ synthase-catalyzed conjugation of glutathione to LTA₄. LTC₄ is produced by neutrophils, macrophages, and mast cells, and by transcellular metabolism in platelets.¹ It is one of the constituents of slow-reacting substance of anaphylaxis (SRS-A) and exhibits potent smooth muscle contracting activity.² LTC₄-induced bronchoconstriction and enhanced vascular permeability contribute to the pathogenesis of asthma and acute allergic hypersensitivity.^{3,4} The concentration of LTC₄ required to produce marked contractions of lung parenchymal strips and isolated tracheal rings is about 1 nM.⁴ LTC₄ methyl ester is a more lipid soluble form of LTC₄. The biological activity of LTC₄ methyl ester has not been reported.

References

1. Maclouf, J.A. and Murphy, R.C. *J. Biol. Chem.* **263**, 174-181 (1988).
2. Piper, P.J. *Physiol. Rev.* **64**, 744-761 (1984).
3. Samuelsson, B. *Science* **220**, 568-575 (1983).
4. Lefer, A.M. *Biochem. Pharmacol.* **35**, 123-127 (1986).

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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