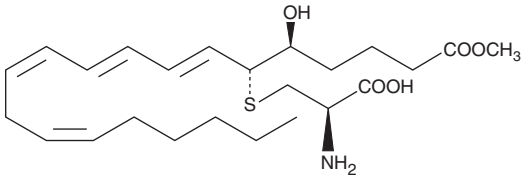
PRODUCT INFORMATION

Leukotriene E_4 methyl ester

Item No. 10007166

CAS Registry No.: 89461-65-4
Formal Name: 5S-hydroxy-6R-(S-cysteinyl)-7E,9E,11Z,14Z-eicosatetraenoic acid, methyl ester
Synonym: LTE_4 methyl ester
MF: $C_{24}H_{39}NO_5S$
FW: 453.6
Purity: ≥97%
UV/Vis.: λ_{max}: 281 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 E_4 (LTE_4) 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 LTE_4 methyl ester in these solvents is approximately 50 mg/ml.

LTE_4 methyl ester is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, the ethanolic solution of LTE_4 methyl ester should be diluted with the aqueous buffer of choice. The solubility of LTE_4 methyl ester in PBS (pH 7.2) is approximately 0.1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

LTE_4 is produced by the action of a dipeptidase on LTD_4 leaving only the cysteinyl group still attached to the fatty acid backbone.[1] It is one of the constituents of slow-reacting substance of anaphylaxis (SRS-A).[2] LTE_4 is considerably less active (8 to 12-fold) than LTC_4 in the biological activities characteristic of cysteinyl LTs.[1,3] Unlike LTC_4 and LTD_4, LTE_4 accumulates in both plasma and urine. Therefore, urinary excretion of LTE_4 is most often used as an indicator of asthma.[4-6] LTE_4 methyl ester is a more lipid soluble form of LTE_4. The biological activity of LTE_4 methyl ester has not been reported.

References

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2. Samuelsson, B. Leukotrienes: Mediators of immediate hypersensitivity reactions and inflammation. *Science* **220(4597)**, 568-575 (1983).
3. Lefer, A.M. Leukotrienes as mediators of ischemia and shock. *Biochem. Pharmacol.* **35(2)**, 123-127 (1986).
4. Kumlin, M., Stensvad, F., Larsson, L., *et al.* Validation and application of a new simple strategy for measurements of urinary leukotriene E_4 in humans. *Clin. Exp. Allergy* **25(5)**, 467-479 (1995).
5. Drazen, J.M., O'Brien, J., Sparrow, D., *et al.* Recovery of leukotriene E_4 from the urine of patients with airway obstruction. *Am. Rev. Respir. Dis.* **146(1)**, 104-108 (1992).
6. Kumlin, M., Dahlén, B., Björck, T., *et al.* Urinary excretion of leukotriene E_4 and 11-dehydro-thromboxane B_2 in response to bronchial provocations with allergen, aspirin, leukotriene D_4, and histamine in asthmatics. *Am. Rev. Respir. Dis.* **146(1)**, 96-103 (1992).

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