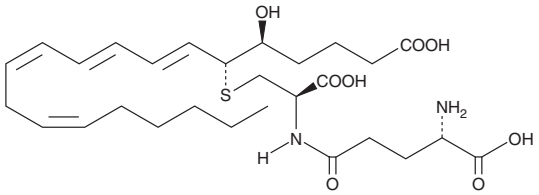
PRODUCT INFORMATION

Leukotriene F_4

Item No. 20520

CAS Registry No.: 83851-42-7
Formal Name: 5S-hydroxy-6R-(S-γ-glutamylcysteinyl)-7E,9E,11Z,14Z-eicosatetraenoic acid
Synonym: LTF_4
MF: $C_{28}H_{44}N_2O_8S$
FW: 568.7
Purity: ≥97%*
UV/Vis.: λ_{max}: 280 nm ε: 40,000
Supplied as: A solution in methanol
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 F_4 (LTF_4) is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as DMSO or dimethyl formamide purged with an inert gas can be used. The solubility of LTF_4 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 LTF_4 is needed, it can be prepared by evaporating the methanol and directly dissolving the neat oil in aqueous buffers. The solubility of LTF_4 in PBS (pH 7.2) is approximately 100 µg/ml. Be certain that your buffers are free of oxygen, transition metal ions, and redox active compounds. We do not recommend storing the aqueous solution for more than one day.

Description

LTF_4 is a cysteinyl-leukotriene produced *in vitro*, but not reported to date *in vivo*. It is formed by the incubation of LTE_4 with γ-glutamyl transpeptidase and glutathione. LTF_4 is a weak agonist in its ability to contract vascular smooth muscle.[1] The rank order of potency of the cysteinyl-leukotrienes to contract vascular smooth muscle is LTD_4 > LTC_4 > LTE_4 >> LTF_4.[1,2]

References

1. Bernstrom, K. and Hammerstrom, S. A novel leukotriene formed by transpeptidation of leukotriene E_4. *Biochem. Biophys. Res. Commun.* 109, 800-804 (1982).
2. Lord, A., Charleson, S., Letts, L.G. Leukotriene F_4 and the release of arachidonic acid metabolites from perfused guinea pig lungs *in vitro*. *Prostaglandins* 29, 651-660 (1985).

*All cysteinyl leukotrienes may contain a small amount of the 11-*trans* isomer. The purity for all such leukotrienes excludes the 1-4% *trans* isomer which may be present.

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