

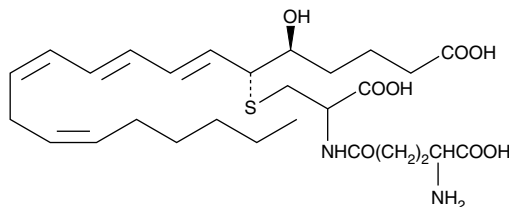
# Product Information



## Leukotriene F<sub>4</sub>

Item No. 20520

**CAS Registry No:** 83851-42-7  
**Formal Name:** 5S-hydroxy-6R-(S-γ-glutamylcysteinyl)-7E,9E,11Z,14Z-eicosatetraenoic acid  
**MF:** C<sub>28</sub>H<sub>44</sub>N<sub>2</sub>O<sub>8</sub>S  
**FW:** 568.7  
**Purity:** ≥97%\*  
**Stability:** ≥1 year at -80°C  
**Supplied as:** A solution in methanol  
**UV/Vis:** λ<sub>max</sub>: 280 nm ε: 40,000



### Laboratory Procedures

Leukotriene F<sub>4</sub> (LTF<sub>4</sub>) is a synthetically derived cysteinyl leukotriene. For long term storage, we suggest that LTF<sub>4</sub> be stored as supplied at -80°C. It will be stable for at least one year.

LTF<sub>4</sub> 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 or dimethyl formamide purged with an inert gas can be used. The solubility of LTF<sub>4</sub> in these solvents is approximately 50 mg/ml. LTF<sub>4</sub> is stable for at least six months in these solvents if stored at -80°C.

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<sub>4</sub> is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of LTF<sub>4</sub> 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.

LTF<sub>4</sub> is a cysteinyl-leukotriene produced *in vitro*, but not reported to date *in vivo*. It is formed by the incubation of LTE<sub>4</sub> with γ-glutamyl transpeptidase and glutathione. LTF<sub>4</sub> is a weak agonist in its ability to contract vascular smooth muscle.<sup>1</sup> The rank order of potency of the cysteinyl-leukotrienes to contract vascular smooth muscle is LTD<sub>4</sub> > LTC<sub>4</sub> > LTE<sub>4</sub> >> LTF<sub>4</sub>.<sup>1,2</sup>

### References

- Bernstrom, K. and Hammerstrom, S. A novel leukotriene formed by transpeptidation of leukotriene E<sub>4</sub>. *Biochem. Biophys. Res. Commun.* 109, 800-804 (1982).
- Lord, A., Charleson, S., Letts, L.G. Leukotriene F<sub>4</sub> and the release of arachidonic acid metabolites from perfused guinea pig lungs *in vitro*. *Prostaglandins* 29, 651-660 (1985).

### Related Products

Leukotriene C<sub>4</sub> - Item No. 20210 • Leukotriene D<sub>4</sub> - Item No. 20310 • Leukotriene E<sub>4</sub> - Item No. 20410

\*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.

**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY. NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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