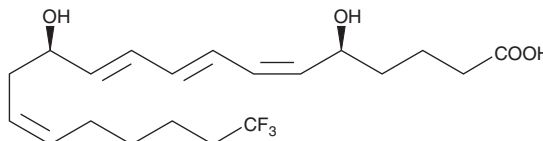


# PRODUCT INFORMATION



## 20-trifluoro Leukotriene B<sub>4</sub> Item No. 20195

**CAS Registry No.:** 115178-97-7  
**Formal Name:** 5S,12R-dihydroxy-20,20,20-trifluoro-6Z,8E,10E,14Z-eicosatetraenoic acid  
**Synonym:** 20-trifluoro LTB<sub>4</sub>  
**MF:** C<sub>20</sub>H<sub>29</sub>F<sub>3</sub>O<sub>4</sub>  
**FW:** 390.4  
**Purity:** ≥97%  
**UV/Vis.:** λ<sub>max</sub>: 270 nm  
**Supplied as:** A solution in ethanol  
**Storage:** -20°C



**Special Conditions:** Light sensitive

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

20-trifluoro LTB<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 20-trifluoro LTB<sub>4</sub> in these solvents is at least 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 20-trifluoro LTB<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 20-trifluoro LTB<sub>4</sub> in PBS (pH 7.2) is approximately 1 mg/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

20-trifluoro LTB<sub>4</sub> is a synthetic analog of LTB<sub>4</sub> resistant to metabolism by ω-oxidation.<sup>1</sup> It is equipotent to LTB<sub>4</sub> in chemotactic activity with an EC<sub>50</sub> of 3 nM.<sup>2,3</sup> In contrast to its chemotactic activity, 20-trifluoro LTB<sub>4</sub> inhibits LTB<sub>4</sub> induced degranulation of neutrophils with an IC<sub>50</sub> of 1-2 nM.<sup>1-3</sup>

### References

1. Tanaka, Y., Klauck, T.M., Jubiz, W., *et al.* Biosynthesis of 20,20,20-trifluoroleukotriene B<sub>4</sub> from 20,20,20-trifluoroarachidonic acid: A metabolically stable analog of leukotriene B<sub>4</sub> and its application to a study of stimulation of leukotriene B<sub>4</sub> synthesis by immunoglobulin G. *Arch. Biochem. Biophys.* **263**, 178-190 (1988).
2. Tsai, B.S., Keith, R.H., Villani-Price, D., *et al.* Differential effects of 20-trifluoromethyl leukotriene B<sub>4</sub> on human neutrophil functions. *Prostaglandins* **37**, 287-302 (1989).
3. Nilsson, E., Gyllenhammar, H., Lerner, R., *et al.* The effect of 20-trifluoromethyl leukotriene B<sub>4</sub> on neutrophil functional responses. *Scand. J. Immunol.* **33**, 357-363 (1991).

#### 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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