



# SZABO SCANDIC

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## Produktinformation



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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- Expressversand

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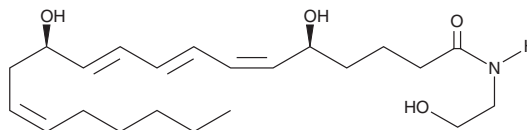
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# PRODUCT INFORMATION



## Leukotriene B<sub>4</sub> Ethanolamide Item No. 20112

**CAS Registry No.:** 877459-63-7  
**Formal Name:** N-(2-hydroxyethyl)-5S,12R-dihydroxy-6Z,8E,10E,14Z-eicosatetraenamide  
**Synonym:** LTB<sub>4</sub>-EA  
**MF:** C<sub>22</sub>H<sub>37</sub>NO<sub>4</sub>  
**FW:** 379.5  
**Purity:** ≥97%  
**UV/Vis.:** λ<sub>max</sub>: 270 nm  
**Supplied as:** A solution in ethanol  
**Storage:** -20°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

LTB<sub>4</sub>-EA 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 LTB<sub>4</sub>-EA in these solvents is approximately 100 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 LTB<sub>4</sub>-EA is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of LTB<sub>4</sub>-EA in PBS (pH 7.2) is approximately 12 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

The effects of LTB<sub>4</sub> are mediated by two known receptors, BLTR<sub>1</sub> and BLTR<sub>2</sub>.<sup>1,2</sup> LTB<sub>4</sub> is a high affinity ligand for BLTR<sub>1</sub>, and many of its pro-inflammatory effects are believed to be transduced through this receptor. BLTR<sub>2</sub> is more inegmatic, in that LTB<sub>4</sub> is not a high-affinity ligand, nor is it clear that BLTR<sub>2</sub> activation promotes inflammation. LTB<sub>4</sub>-EA is a theoretical 5-lipoxygenase metabolite of the endocannabinoid anandamide. In CHO cells transfected with human BLTR<sub>1</sub>, LTB<sub>4</sub>-EA was a potent antagonist with about three times greater affinity for the receptor (K<sub>i</sub>=1.22 nM versus 3.88 nM) than native LTB<sub>4</sub> itself. LTB<sub>4</sub>-EA also antagonized the LTB<sub>4</sub>-induced contractions of guinea pig lung parenchyma with an EC<sub>50</sub> of 10 nM.<sup>3</sup> LTB<sub>4</sub>-EA thus represents a potential endogenous anti-inflammatory compound functioning as a natural antagonist of BLTR1.

### References

1. Yokomizo, T., Izumi, T., Chang, K., *et al.* A G-protein-coupled receptor for leukotriene B<sub>4</sub> that mediates chemotaxis. *Nature* **387(6633)**, 620-624 (1997).
2. Yokomizo, T., Kato, K., Terawaki, K., *et al.* A second leukotriene B<sub>4</sub> receptor, BLT2: A new therapeutic target in inflammation and immunological disorders. *J. Exp. Med.* **193(3)**, 421-431 (2000).
3. Pharmacological characterization of LTB<sub>4</sub> ethanolamide: Interaction with leukotriene (BLT) and vanilloid (TRPV1) receptors, (2003), 121 in 13th Annual ICRS Cannabinoid Symposium.

#### 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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