

# PRODUCT INFORMATION



## Leukotriene B<sub>4</sub> MaxSpec<sup>®</sup> Standard

Item No. 10007240

CAS Registry No.: 71160-24-2

Formal Name: 5S,12R-dihydroxy-6Z,8E,10E,14Z-eicosatetraenoic acid

Synonym: LTB<sub>4</sub>

MF: C<sub>20</sub>H<sub>32</sub>O<sub>4</sub>

FW: 336.5

Purity: ≥95%

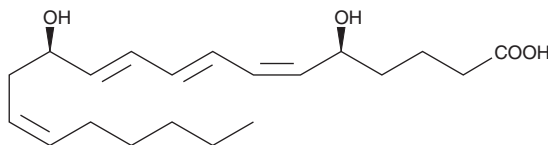
Supplied as: A solution in ethanol; in a deactivated glass ampule

Concentration: 10 µg/ml (nominal); see certificate of analysis for verified concentration

Storage: -20°C

Stability: ≥3 years; *Stability testing is ongoing to ensure concentration accuracy. The certificate of analysis and product expiry date will be updated upon completion of testing.*

Special Conditions: Store upright and unopened at -20°C. Warm to room temperature prior to opening. Light sensitive.



### Description

Leukotriene B<sub>4</sub> (LTB<sub>4</sub>) is a dihydroxy fatty acid derived from arachidonic acid through the 5-LO pathway.<sup>1-3</sup> It promotes a number of leukocyte functions including aggregation, stimulation of ion fluxes, enhancement of lysosomal enzyme release, superoxide anion production, chemotaxis, and chemokinesis. In subnanomolar ranges (3.9 x 10<sup>-10</sup> M), LTB<sub>4</sub> causes chemotaxis and chemokinesis in human polymorphonuclear leukocytes.<sup>4</sup> At higher concentrations, (1.0 x 10<sup>-7</sup> M), LTB<sub>4</sub> leads to neutrophil aggregation and degranulation as well as superoxide anion production.<sup>4,5</sup>

LTB<sub>4</sub> MaxSpec<sup>®</sup> standard is a quantitative grade standard of LTB<sub>4</sub> (Item No. 20110) that has been prepared specifically for mass spectrometry or any application where quantitative reproducibility is required. The solution has been prepared gravimetrically and is supplied in a deactivated glass ampule sealed under argon. The concentration was verified by comparison to an independently prepared calibration standard. This LTB<sub>4</sub> MaxSpec<sup>®</sup> standard is guaranteed to meet identity, purity, stability, and concentration specifications and is provided with a batch-specific certificate of analysis. Ongoing stability testing is performed to ensure the concentration remains accurate throughout the shelf life of the product.

**Note:** The amount of solution added to the vial is in excess of the listed amount. Therefore, it is necessary to accurately measure volumes for preparation of calibration standards. Follow recommended storage and handling conditions to maintain product quality.

### References

1. Rådmark, O., Malmsten, C., Samuelsson, B., *et al.* Leukotriene A: Stereochemistry and enzymatic conversion to leukotriene B. *Biochem. Biophys. Res. Commun.* **92**(3), 954-961 (1980).
2. Ford-Hutchinson, A.W., Bray, M.A., Doig, M.V., *et al.* Leukotriene B, a potent chemokinetic and aggregating substance released from polymorphonuclear leukocytes. *Nature* **286**(5770), 264-265 (1980).
3. McGee, J. and Fitzpatrick, F. Enzymatic hydration of leukotriene A<sub>4</sub>. Purification and characterization of a novel epoxide hydrolase from human erythrocytes. *J. Biol. Chem.* **260**(23), 12832-12837 (1985).
4. Ford-Hutchinson, A.W. Leukotriene B<sub>4</sub> in inflammation. *Crit. Rev. Immunol.* **10**(1), 1-12 (1990).
5. McMillan, R.M. and Foster, S.J. Leukotriene B<sub>4</sub> and inflammatory disease. *Agents Actions* **24**(1-2), 114-119 (1988).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 04/27/2020

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM