

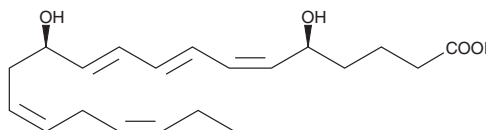
PRODUCT INFORMATION



Leukotriene B₅

Item No. 21110

CAS Registry No.: 80445-66-5
Formal Name: 5S,12R-dihydroxy-6Z,8E,10E,14Z,17Z-eicosapentaenoic acid
Synonym: LTB₅
MF: C₂₀H₃₀O₄
FW: 334.5
Purity: ≥98%
UV/Vis.: λ_{max}: 271 nm ε: 50,000
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥1 years



Special Conditions: Oxygen and light sensitive

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

Laboratory Procedures

Leukotriene B₅ (LTB₅) 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 or nitrogen can be used. LTB₅ is soluble in these solvents at concentrations of 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. Be certain that your buffers are free of oxygen, transition metal ions, and redox active compounds. Also, 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 LTB₅ is needed, evaporate the ethanol under a stream of nitrogen and dissolve the neat oil in the buffer of choice. LTB₅ is soluble in PBS (pH 7.2) at concentrations of at least 1 mg/ml. For more concentrated aqueous solutions, use basic buffers (pH >8.0 and ionic strength ≥0.1 M). Store aqueous solutions of LTB₅ on ice and use within 12 hours.

Description

LTB₅ is a leukotriene with diverse biological activities.¹⁻⁵ It is a metabolite of eicosapentaenoic acid (EPA; Item Nos. 90110 | 90110.1 | 21908) formed through the 5-lipoxygenase (5-LO) pathway.⁶ LTB₅ increases contraction of bullfrog lung strips *ex vivo* in a concentration-dependent manner.¹ *In vivo*, LTB₅ (100 nM) reduces tumor volume in mice injected with Tm1 murine melanoma cells.² LTB₅ also elicits chemokinesis and lysosomal enzyme release from polymorphonuclear leukocytes (PMNLs) 20- to 30-fold less, and induces platelet aggregation 8-fold less, potentially than LTB₄ (Item No. 20110).³⁻⁵

References

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2. Bachi, A.L., Kim, F.J., Nonogaki, S., *et al. Mol. Cancer Res.* **7**(9), 1417-1424 (2009).
3. Lee, T.H., Mencia-Huerta, J.M., Shih, C., *et al. J. Biol. Chem.* **259**(4), 2383-2389 (1984).
4. Leitch, A.G., Lee, T.H., Ringel, E.W., *et al. J. Immunol.* **132**(5), 2559-2565 (1984).
5. Terano, T., Salmon, J.A., and Moncada, S. *Prostaglandins* **27**(2), 217-232 (1984).
6. Ford-Hutchinson, A.W., Bray, M.A., Doig, M.V., *et al. Nature* **286**(5770), 264-265 (1980).

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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