

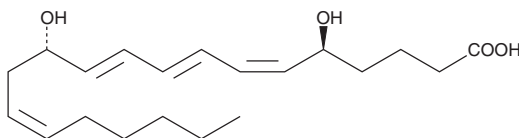
PRODUCT INFORMATION



12-*epi* Leukotriene B₄

Item No. 20135

CAS Registry No.: 83709-73-3
Formal Name: 5S,12S-dihydroxy-6Z,8E,10E,14Z-eicosatetraenoic acid
Synonym: 12-*epi* LTB₄
MF: C₂₀H₃₂O₄
FW: 336.5
Purity: ≥97%
UV/Vis.: λ_{max}: 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

12-*epi* LTB₄ 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 12-*epi* LTB₄ in these solvents is approximately 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 12-*epi* LTB₄ is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 12-*epi* LTB₄ in PBS (pH 7.2) is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

LTB₄ compounds are produced by both enzymatic and non-enzymatic processes. The products of enzymatic origin, via LTA₄ hydrolase, are stereospecifically 12(R). Non-enzymatic hydrolysis products are 50:50 mixtures at C-12, but are almost exclusively *trans* at C-6. Thus, the non-enzymatic hydrolysis product of LTA₄ is 6-*trans*-12-*epi* LTB₄. 12-*epi* LTB₄ is an isomer which would not be expected to occur in either non-enzymatic hydrolysis products, or in the enzymatic products of LTA₄ hydrolase.¹ Compared to LTB₄, 12-*epi* LTB₄ has significantly reduced activity for the LTB₄ receptor on human neutrophils (IC₅₀ of 7.5 μM),² and on guinea pig lung membranes with a K_i of 4.7 μM.³ 12-*epi* LTB₄ is a weak agonist at both the recombinant human BLT₁ and BLT₂ receptors, requiring approximately 10 μM for full activation of the receptor.⁴

References

1. Sala, A., Bolla, M., Zarini, S., et al. *J. Biol. Chem.* **271**, 17944-17948 (1996).
2. Jackson, R.H., Morrissey, M.M., Sills, M.A., et al. *J. Pharmacol. Exp. Ther.* **262**(1), 80-89 (1992).
3. Cristol, J.P., Provençal, B., Borgeat, P., et al. *J. Pharmacol. Exp. Ther.* **247**(3), 1199-1203 (1988).
4. Yokomizo, T., Kato, K., Hagiya, H., et al. *J. Biol. Chem.* **276**(15), 12454-12459 (2001).

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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