

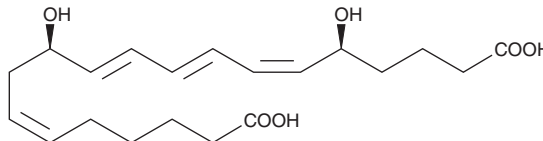
PRODUCT INFORMATION



20-carboxy Leukotriene B₄

Item No. 20180

CAS Registry No.: 80434-82-8
Formal Name: 5S,12R-dihydroxy-6Z,8E,10E,14Z-eicosatetraene-1,20-dioic acid
Synonym: 20-carboxy LTB₄
MF: C₂₀H₃₀O₆
FW: 366.5
Purity: ≥97%
UV/Vis.: λ_{max}: 270 nm
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 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

20-carboxy 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 or dimethyl formamide purged with an inert gas can be used. The solubility of 20-carboxy 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. 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 20-carboxy LTB₄ is needed, evaporate the ethanol under a stream of nitrogen and dissolve the neat oil in the buffer of choice. 20-carboxy LTB₄ 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 ≥ 0.1M). Store aqueous solutions of 20-carboxy LTB₄ on ice and use within 12 hours.

Description

20-carboxy LTB₄ is a metabolite of LTB₄ in human neutrophils. In human leukocytes, LTB₄ is inactivated by the enzyme LTB₄ 20-hydroxylase. The resulting 20-hydroxy LTB₄ is further oxidized to 20-carboxy LTB₄.¹ LTB₄ metabolism in isolated rat hepatocytes also results in production of 20-carboxy LTB₄ along with other ω-oxidation products.² The biological activity of 20-carboxy LTB₄ is only about 2.6% compared to that of LTB₄ in causing PMNL degranulation.³

References

1. Hansson, G., Lindgren, J.Å., Dahlén, S.-E., *et al.* Identification and biological activity of novel ω-oxidized metabolites of leukotriene B₄ from human leukocytes. *FEBS Lett.* **130**, 107-112 (1981).
2. Harper, T.W., Garrity, M.J., and Murphy, R.C. Metabolism of leukotriene B₄ in isolated rat hepatocytes. Identification of a novel 18-carboxy-19,20-dinor leukotriene B₄ metabolite. *J. Biol. Chem.* **261**, 5414-5418 (1986).
3. Feinmark, S.J., Lindgren, J.Å., Claesson, H.-E., *et al.* Stimulation of human leukocyte degranulation by leukotriene B₄ and its ω-oxidized metabolites. *FEBS Lett.* **136**, 141-144 (1981).

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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