

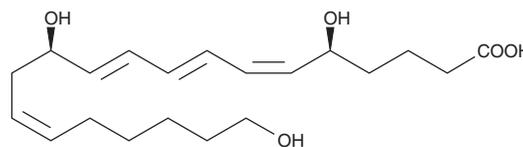
PRODUCT INFORMATION



20-hydroxy Leukotriene B₄

Item No. 20190

CAS Registry No.: 79516-82-8
Formal Name: 5S,12R,20-trihydroxy-6Z,8E,10E,14Z-eicosatetraenoic acid
Synonym: 20-hydroxy LTB₄
MF: C₂₀H₃₂O₅
FW: 352.5
Purity: ≥97%
UV/Vis.: λ_{max}: 270 nm
Supplied as: A 100 µg/ml solution in ethanol
Storage: -80°C
Stability: ≥1 year



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-hydroxy 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, dimethyl formamide, or acetonitrile purged with an inert gas or nitrogen can be used. 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.

It is difficult to obtain aqueous solutions of 20-hydroxy LTB₄ directly. However, an organic solvent-free solution of 20-hydroxy LTB₄ can be prepared using basic concentrated buffers (pH > 8.0 and ionic strength ≥ 0.1M). Add 400 µl of cold buffer (0°C) per mg of 20-hydroxy LTB₄ and agitate vigorously and/or ultrasonicate. We do not recommend storing the aqueous solution for more than one day.

Description

20-hydroxy LTB₄ is a metabolite of LTB₄ in human neutrophils. In human leukocytes, LTB₄ is inactivated by the enzyme LTB₄ 20-hydroxylase. 20-hydroxy LTB₄ is not only much less active (~5%) compared to LTB₄ in causing degranulation of PMNL,¹ but actually inhibits LTB₄-induced degranulation of human neutrophils (K_i = 13.3 nM).² However, 20-hydroxy LTB₄ is as active as LTB₄ in contracting parenchymal strips from guinea pig lung.³ 20-hydroxy LTB₄ retains considerable ligand binding affinity at the BLT₂ receptor,^{4,5} but does not appear to function as an agonist.⁶

References

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3. Hansson, G., Lindgren, J.Å., Dahlén, S.-E., et al. *FEBS Lett.* **130(1)**, 107-112 (1981).
4. Wang, S., Gustafson, E., Pang, L., et al. *J. Biol. Chem.* **275(52)**, 40686-40694 (2000).
5. Yokomizo, T., Kato, K., Hagiya, H., et al. *J. Biol. Chem.* **276(15)**, 12454-12459 (2001).
6. Kamohara, M., Takasaki, J., Matsumoto, M., et al. *J. Biol. Chem.* **275(35)**, 27000-27004 (2000).

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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