

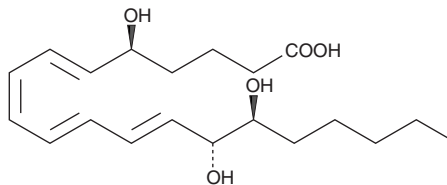
Product Information



5(S),14(R)-Lipoxin B₄

Catalog No. 90420

CAS Registry No.: 98049-69-5
Formal Name: 5S,14R,15S-trihydroxy-6E,8Z,10E,12E eicosatetraenoic acid
Synonym: 5(S),14(R)-LXB₄
MF: C₂₀H₃₂O₅
FW: 352.5
Purity: ≥95%
Stability: ≥1 year at -80°C
Supplied as: A solution in ethanol
Misc.: Oxygen and light sensitive



Laboratory Procedures

For long term storage, we suggest that 5(S),14(R)-lipoxin B₄ (5(S),14(R)-LXB₄) be stored as supplied at -80°C. It should be stable for at least one year.

5(S),14(R)-LXB₄ 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 5(S),14(R)-LXB₄ 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 5(S),14(R)-LXB₄ is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 5(S),14(R)-LXB₄ in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Lipoxins are a series of anti-inflammatory lipid mediators whose brief appearance generally signals the resolution of inflammation. Lipoxin A₄ (LXA₄) is a potent inhibitor of leukotriene (LT)-triggered polymorphonuclear neutrophil (PMN)-endothelial cell interaction and also blocks PMN migration stimulated by LTB₄. 5(S),6(R)-LXB₄ is a positional isomer of LXA₄ produced by the metabolism of 15-HETE or 15-HpETE by human leukocytes.^{1,2} At a concentration of 10⁻⁷ M, 5(S),6(R)-LXB₄ inhibits PMN migration stimulated by LTB₄ and inhibits LTB₄-induced adhesion of PMNs with an IC₅₀ value of ~3 x 10⁻¹⁰ M.³

References

1. Serhan, C.N., Hamberg, M., Samuelsson, B., *et al.* On the stereochemistry and biosynthesis of lipoxin B. *Proc. Natl. Acad. Sci. USA* 83, 1983-1987 (1986).
2. Serhan, C.N., Hamberg, M., and Samuelsson, B. Lipoxins: Novel series of biologically active compounds formed from arachidonic acid in human leukocytes. *Proc. Natl. Acad. Sci. USA* 81, 5335-5339 (1984).
3. Papayianni, A., Serhan, C.N., and Brady, H.R. Lipoxin A₄ and B₄ inhibit leukotriene-stimulated interactions of human neutrophils and endothelial cells. *J. Immunol.* 156, 2264-2272 (1996).

Related Products

5(S),6(R)-Lipoxin A₄ methyl ester - Cat. No. 10033 • 5(S),6(S)-Lipoxin A₄ - Cat. No. 10049 • 5(S),6(R),15(R)-Lipoxin A₄ - Cat. No. 90415 • 5(S),6(R)-Lipoxin A₄ - Cat. No. 90410 • Lipoxin A₅ - Cat. No. 10011453

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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