

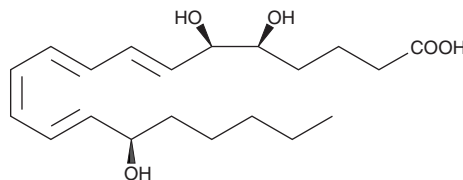
Product Information



5(S),6(R),15(R)-Lipoxin A₄

Item No. 90415

CAS Registry No.: 171030-11-8
Formal Name: 5(S),6(R),15(R)-trihydroxy-7E,9E,11Z,13E-eicosatetraenoic acid
Synonyms: AT-Lipoxin A₄, 15-*epi* Lipoxin A₄, 5(S),6(R),15(R)-LXA₄
MF: C₂₀H₃₂O₅
FW: 352.5
Purity: ≥95%
Stability: ≥1 year at -80°C
Supplied as: A solution in ethanol



Laboratory Procedures

For long term storage, we suggest that 5(S),6(R),15(R)-lipoxin A₄ (5(S),6(R),15(R)-LXA₄) be stored as supplied at -80°C. It should be stable for at least one year.

5(S),6(R),15(R)-LXA₄ 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),6(R),15(R)-LXA₄ 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),6(R),15(R)-LXA₄ is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 5(S),6(R),15(R)-LXA₄ in PBS, pH 7.2, is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Lipid-derived lipoxins are produced at the site of vascular and mucosal inflammation where they down-regulate polymorphonuclear leukocyte recruitment and function. 5(S),6(R),15(R)-LXA₄ is derived from the aspirin-triggered formation of 15(R)-HETE from arachidonic acid.^{1,2} 5(S),6(R),15(R)-LXA₄ inhibits LTB₄-induced chemotaxis, adherence, and transmigration of neutrophils with twice the potency of LXA₄ demonstrating activity in the nM range.^{2,3} The anti-inflammatory effects of aspirin may be ascribed in part to the ability of 5(S),6(R),15(R)-LXA₄ to regulate leukocyte function.⁴

References

- Clària, J., Lee, M.H., and Serhan, C.N. Aspirin-triggered lipoxins (15-*epi*-LX) are generated by the human lung adenocarcinoma cell line (A549)-neutrophil interactions and are potent inhibitors of cell proliferation. *Mol. Med.* **2**, 583-596 (1996).
- Clària, J. and Serhan, C.N. Aspirin triggers previously undescribed bioactive eicosanoids by human endothelial cell-leukocyte interactions. *Proc. Natl. Acad. Sci. USA* **92**, 9475-9479 (1995).
- Fierro, I.M., Colgan, S.P., Bernasconi, G., *et al.* Lipoxin A₄ and aspirin-triggered 15-*epi*-lipoxin A₄ inhibit human neutrophil migration: Comparisons between synthetic 15 epimers in chemotaxis and transmigration with microvessel endothelial cells and epithelial cells. *J. Immunol.* **170**, 2688-2694 (2003).
- Chiang, N., Bermudez, E.A., Ridker, P.M., *et al.* Aspirin triggers antiinflammatory 15-*epi*-lipoxin A₄ and inhibits thromboxane in a randomized human trial. *Proc. Natl. Acad. Sci. USA* **101**(42), 15178-15183 (2004).

Related Products

5(S),6(R)-Lipoxin A₄ methyl ester - Item No. 10033 • 5(S),6(S)-Lipoxin A₄ - Item No. 10049 • 5(S),6(R)-Lipoxin A₄ - Item No. 90410 • 5(S),14(R)-Lipoxin B₄ - Item No. 90420 • Lipoxin A₅ - Item 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 *via* email to your institution.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com