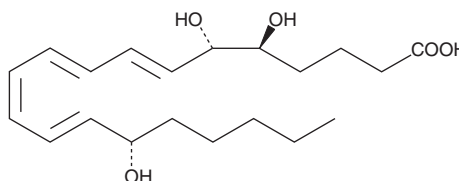


PRODUCT INFORMATION

6(S)-Lipoxin A₄ Item No. 10049

CAS Registry No.: 94292-80-5
Formal Name: 5S,6S,15S-trihydroxy-7E,9E,11Z,13E-eicosatetraenoic acid
Synonyms: 5(S),6(S)-Lipoxin A₄, 6-*epi*-Lipoxin A₄, 6(S)-LXA₄, 5(S),6(S),15(S)-TriHETE
MF: C₂₀H₃₂O₅
FW: 352.5
Purity: ≥95%
Stability: ≥1 year at -80°C
Supplied as: A solution in ethanol
UV/Vis.: λ_{max}: 302 nm ε: 50,000
Miscellaneous: Light Sensitive



Laboratory Procedures

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

6(S)-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. It is recommended that this product be stored and handled in an ethanol solution. Lipoxins can isomerize and degrade when put into freeze thaw conditions and/or in solvents such as DMF or DMSO. If diluted with an aqueous buffer, this product should be discarded immediately after use.

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 6(S)-LXA₄ is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of 6(S)-LXA₄ in PBS (pH 7.2) is approximately 1 mg/ml. Store aqueous solutions of 6(S)-LXA₄ on ice and use within 12 hours of preparation. Although the aqueous solutions of 6(S)-LXA₄ may be stable for more than 12 hours, we strongly recommend using a fresh preparation each day.

Description

The lipoxins are trihydroxy fatty acids containing a 7,9,11,13-conjugated tetraene.¹ LXA₄ was first described as a metabolite of 15-HpETE and/or 15-HETE when added *in vitro* to isolated human leukocytes.² The material obtained in this manner consists of at least four distinct isomers: 5(S), 6(S); 5(S), 6(R); and the 11-*trans* and 11-*cis* isomers of each of these. 6(S)-LXA₄ is one of the original four metabolites first identified by Serhan, Nicolaou, and Samuelsson.² It was considered to be an artifact by these authors because it lacked the potency of the 5(S),6(R) isomer with respect to contraction of isolated guinea pig lung parenchymal strips.

It has not been possible to isolate "natural" LXA₄ from humans or other mammals in amounts sufficient for determination of absolute stereochemistry. Most authors refer to LXA₄ as the 5(S),6(R), 11-*cis* isomer, but it is not clear that biological systems are aware of or agree with these conventions. Historically, conjugated tetraenes flanked by hydroxyl groups of mixed stereochemistry have been marketed as "Lipoxin A₄" by some biomolecular supply companies. The availability of single pure LXA₄ enantiomers should help to reduce the confusion this has caused.

References

1. Samuelsson, B., Dahlgren, S.-E., Lindgren, J.Å., *et al.* *Science* **237**, 1171-1176 (1987).
2. Serhan, C.N., Nicolaou, K.C., Webber, S.E., *et al.* *J. Biol. Chem.* **261**, 16340-16345 (1986).

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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