

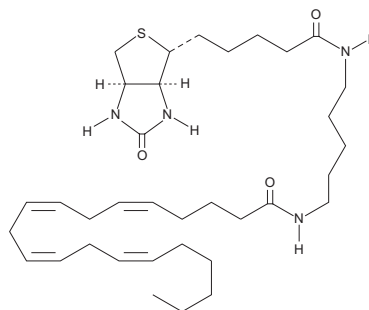
Product Information



Arachidonic Acid-biotin

Catalog No. 10007466

Formal Name: 5Z,8Z,11Z,14Z-eicosatetraenoyl-N'-biotinoyl-1,5-diaminopentane
MF: C₃₅H₅₈N₄O₃S
FW: 614.9
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol



Laboratory Procedures

For long term storage, we suggest that arachidonic acid-biotin be stored as supplied at -20°C. It should be stable for at least one year.

Arachidonic acid-biotin 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 arachidonic acid-biotin in these solvents is at least 25 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 arachidonic acid-biotin is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of arachidonic acid-biotin in PBS (pH 7.2) is at least 0.15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Virtually all cellular arachidonic acid is esterified in membrane phospholipids where its presence is tightly regulated through multiple interconnected pathways.¹ Free arachidonic acid is a transient, critical substrate for the biosynthesis of eicosanoid second messengers. Receptor-stimulated release, metabolism, and re-uptake of free arachidonate are all important aspects of cell signalling and inflammation.² Arachidonic acid-biotin was designed to allow arachidonic acid to be detected in complexes with protein binding partners such as fatty acid binding proteins (FABPs). It is thus a tool to be used in the general elucidation of the signaling and transport of free arachidonic acid.

References

1. Nixon, A.B., Greene, D.G., and Wykle, R.L. Comparison of acceptor and donor substrates in the CoA-independent transacylase reaction in human neutrophils. *Biochim. Biophys. Acta* **1300**, 187-196 (1996).
2. Burgoyne, R.D. and Morgan, A. The control of free arachidonic acid levels. *Trends Biochem. Sci.* **15**, 365-366 (1990).

Related Products

Prostaglandin A₁-biotin - Cat. No. 10013 • Arachidonic Acid - Cat. No. 90010 • Arachidonic Acid-d₈ - Cat. No. 390010 • Prostaglandin D₂-biotin - Cat. No. 10006697 • Arachidonic Acid Quant-PAK - Cat. No. 10006835 • Prostaglandin E₂-biotin - Cat. No. 10006987 • Prostaglandin F_{2α}-biotin - Cat. No. 10006988

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MATERIAL SAFETY DATA

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