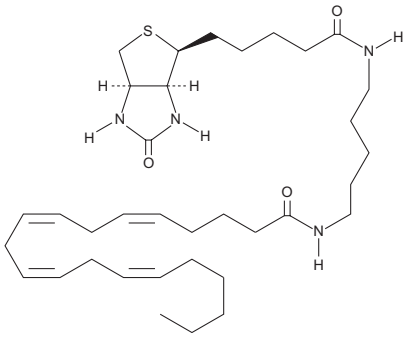
PRODUCT INFORMATION

Arachidonic Acid-biotin

Item No. 10007466



CAS Registry No.: 1217901-28-4
Formal Name: 5Z,8Z,11Z,14Z-eicosatetraenoyl-N'-biotinoyl-1,5-diaminopentane
MF: $C_{35}H_{58}N_4O_3S$
FW: 614.9
Purity: ≥95%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: As supplied, 1 year from the QC date provided on the Certificate of Analysis, when stored properly

Laboratory Procedures

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 ethanol, DMSO, and dimethyl formamide purged with an inert gas can be used. The solubility of arachidonic acid-biotin in these solvents is 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.

Description

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).

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.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 07/12/2016

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM