

PRODUCT INFORMATION

Arachidonic Acid 1,2,3,4,5-¹³C

Item No. 17336

Formal Name: 5Z,8Z,11Z,14Z-eicosatetraenoic-1,2,3,4,5-¹³C₅ acid

Synonyms: AA 1,2,3,4,5-¹³C, FA 20:4-¹³C

MF: C₁₅[¹³C]₅H₃₂O₂

FW: 309.4

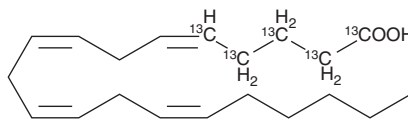
Purity: ≥95%

Supplied as: A solution in methanol

Storage: -20°C

Stability: ≥1 year

Special Conditions: Oxygen and light sensitive



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Arachidonic acid 1,2,3,4,5-¹³C is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as ethanol, DMSO, dimethyl formamide (DMF), and 0.1 M Na₂CO₃ purged with an inert gas can be used. The solubility of arachidonic acid 1,2,3,4,5-¹³C in DMSO and DMF is approximately 100 mg/ml and approximately 1 mg/ml in 0.1 M Na₂CO₃. Arachidonic acid 1,2,3,4,5-¹³C is miscible in ethanol

Description

Arachidonic acid (Item No. 90010) is an essential fatty acid and a precursor for all prostaglandins, thromboxanes, and leukotrienes. 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 signaling and inflammation.² Arachidonic acid 1,2,3,4,5-¹³C is an isotopically enriched form of this PUFA with carbon-13 occurring at positions 1, 2, 3, 4, and 5. It can be used to study metabolic processes related to arachidonic acid by means of mass spectrometry.

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(3)**, 187-196 (1996).
2. Burgoyne, R.D. and Morgan, A. The control of free arachidonic acid levels. *Trends Biochem. Sci.* **15(10)**, 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.

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