

PRODUCT INFORMATION

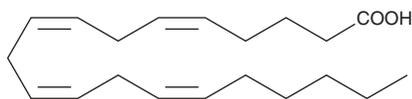


Arachidonic Acid Quant-PAK

Item No. 10006835

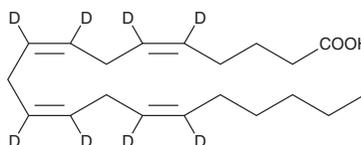
Arachidonic Acid

CAS Registry No.: 506-32-1
Formal Name: 5Z,8Z,11Z,14Z-eicosatetraenoic acid
Synonym: AA
MF: C₂₀H₃₂O₂
FW: 304.5
Purity: ≥98%
Supplied as: A solution in ethanol
Storage: -20°C
Stability: ≥2 years



Arachidonic Acid-d₈

CAS Registry No.: 69254-37-1
Formal Name: 5Z,8Z,11Z,14Z-eicosatetraenoic-5,6,8,9,11,12,14,15-d₈ acid
Synonym: AA-d₈
MF: C₂₀H₂₄D₈O₂
FW: 312.5
Chemical Purity: ≥98% (Arachidonic Acid)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₈); ≤1% d₀
Supplied as: A solution in methyl acetate
Storage: -20°C
Stability: ≥2 years



Laboratory Procedures

This arachidonic acid Quant-PAK contains 50 µg of arachidonic acid-d₈ and 2-4 mg of arachidonic acid (please see the vial for exact amount and concentration). For long term storage, we suggest that arachidonic acid and arachidonic acid-d₈ be stored as supplied at -20°C. They should be stable for at least two years.

Arachidonic acid 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 in these solvents is approximately 100 mg/ml. Arachidonic acid is soluble in 0.1 M NA₂CO₃ at a concentration of approximately 1.7 mg/ml.

Arachidonic acid-d₈ is supplied as a solution in methyl acetate. To change the solvent, simply evaporate the methyl acetate 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-d₈ in these solvents is approximately 100 mg/ml. Arachidonic acid-d₈ is also miscible in ethanol.

Arachidonic acid-d₈ is intended for use as an internal standard for the quantification of arachidonic acid (Item No. 90010) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

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

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Description

Arachidonic acid 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

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).

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