

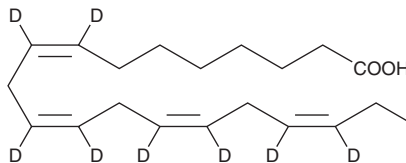
Product Information



ω -3 Arachidonic Acid-d₈

Catalog No. 390011

Formal Name: 8Z,11Z,14Z,17Z-eicosatetraenoic-8,9,11,12,14,15,17,18-d₈ acid
MF: C₂₀H₂₄D₈O₂
FW: 312.5
Chemical Purity: ≥98%
Deuterium Incorporation: ≤1% d₀
Stability: ≥1 year at -20°C
Supplied as: A solution in methyl acetate



Laboratory Procedures

ω -3 Arachidonic acid-d₈ contains eight deuterium atoms at the 8, 9, 11, 12, 14, 15, 17, and 18 positions. It is intended for use as an internal standard for the quantification of ω -3 arachidonic acid by GC- or LC-mass spectrometry (MS). For long term storage, we suggest that ω -3 arachidonic acid-d₈ be stored as supplied at -20°C. It will be stable for at least one year.

ω -3 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. ω -3 Arachidonic acid-d₈ is miscible in ethanol, but solvents such as DMSO and dimethyl formamide purged with an inert gas can also be used. The solubility of ω -3 arachidonic acid-d₈ in these solvents is approximately 100 mg/ml.

ω -3 Arachidonic acid-d₈ is used as an internal standard for the quantification of ω -3 arachidonic acid by stable isotope dilution MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the weight indicated on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard ω -3 arachidonic acid by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

ω -3 Arachidonic acid is a rare polyunsaturated fatty acid found in trace amounts in dietary sources. ω -3 fatty acids are now known to be essential for infant growth and development and to protect against heart disease, thrombosis, hypertension, and inflammatory and autoimmune disorders.¹ In human platelet membranes, ω -3 arachidonic acid inhibits arachidonoyl-CoA synthetase with a K_i value of 14 μ M. It also inhibits arachidonoyl-CoA synthetase in calf brain extracts with an IC₅₀ value of about 5 μ M.²

References

1. Simopoulos, A.P. Omega-3 fatty acids in health and disease and in growth and development. *Am. J. Clin. Nutr.* **54**, 438-463 (1991).
2. Neufeld, E.J., Sprecher, H., Evans, R.W., *et al.* Fatty acid structural requirements for activity of arachidonoyl-CoA synthetase. *J. Lipid Res.* **25**, 288-293 (1984).

Related Products

Arachidonic Acid - Cat. No. 90010 • ω -3 Arachidonic Acid - Cat. No. 90011 • Arachidonic Acid-d₈ - Cat. No. 390010 • ω -3 Arachidonic Acid methyl ester - Cat. No. 10006454 • ω -3 Arachidonic Acid ethyl ester - Cat. No. 10009348

WARNING: THIS PRODUCT IS NOT INTENDED OR APPROVED FOR HUMAN OR VETERINARY USE. USE OF THIS PRODUCT FOR HUMAN OR ANIMAL TESTING IS EXTREMELY HAZARDOUS AND MAY RESULT IN DISEASE, SEVERE INJURY, OR DEATH.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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