

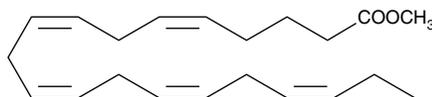
Product Information



Eicosapentaenoic Acid methyl ester

Item No. 9000295

CAS Registry No.: 2734-47-6
Formal Name: 5Z,8Z,11Z,14Z,17Z-eicosapentaenoic acid, methyl ester
Synonym: EPA methyl ester
MF: C₂₁H₃₂O₂
FW: 316.5
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A solution in ethanol



Laboratory Procedures

For long term storage, we suggest that eicosapentaenoic acid (EPA) methyl ester be stored as supplied at -20°C. It should be stable for at least one year.

EPA methyl ester 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 EPA methyl ester in these solvents is approximately 100 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 EPA methyl ester is needed, it can be prepared by evaporating the ethanol and directly dissolving the neat oil in aqueous buffers. The solubility of EPA methyl ester in PBS, pH 7.2, is approximately 0.15 mg/ml. We do not recommend storing the aqueous solution for more than one day.

EPA is an ω-3 fatty acid which can have beneficial effects on vascular and immune physiology.¹⁻³ Also, EPA serves as a precursor for resolvins, mediators that help resolve inflammatory processes.⁴ EPA methyl ester is a more lipid-soluble form of EPA. This compound may be more desirable than the free acid in certain formulations. In addition, the methyl ester form of EPA may serve as a prodrug, since it should facilitate uptake of EPA and then be hydrolyzed by esterases to generate the free acid after uptake into cells.

References

1. Pottala, J.V., Garg, S., Cohen, B.E., *et al.* Blood eicosapentaenoic and docosahexaenoic acids predict all-cause mortality in patients with stable coronary heart disease: The heart and soul study. *Circ. Cardiovasc. Qual. Outcomes* **3**, 406-412 (2010).
2. Pestka, J.J. N-3 polyunsaturated fatty acids and autoimmune-mediated glomerulonephritis. *Prostaglandins Leukot. Essent. Fatty Acids* **82(4-6)**, 1-17 (2010).
3. Chapkin, R.S., Kim, W., Lupton, J.R., *et al.* Dietary docosahexaenoic and eicosapentaenoic acid: Emerging mediators of inflammation. *Prostaglandins Leukot. Essent. Fatty Acids* **81(2-3)**, 1-10 (2009).
4. Seki, H., Sasaki, T., Ueda, T., *et al.* Resolvins as regulators of the immune system. *Scientific World Journal* **10**, 818-831 (2010).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/9000295

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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 *via* email to your institution.

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