

PRODUCT INFORMATION

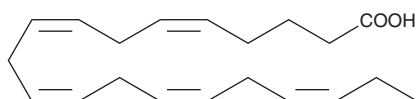


Eicosapentaenoic Acid Quant-PAK

Item No. 13048

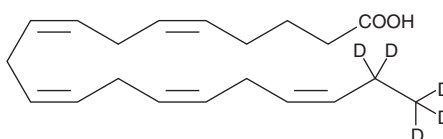
Eicosapentaenoic Acid

CAS Registry No.: 10417-94-4
Formal Name: 5Z,8Z,11Z,14Z,17Z-eicosapentaenoic acid
Synonyms: EPA, Timnodonic acid
MF: C₂₀H₃₀O₂
FW: 302.5
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A solution in ethanol
Special Conditions: Oxygen and light sensitive



Eicosapentaenoic Acid-d₅

CAS Registry No.: 1197205-73-4
Formal Name: 5Z,8Z,11Z,14Z,17Z-eicosapentaenoic-19,19,20,20,20-d₅ acid
Synonyms: EPA-d₅, Timnodonic acid-d₅
MF: C₂₀H₂₅D₅O₂
FW: 307.5
Chemical Purity: ≥98% (Eicosapentaenoic Acid)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
Stability: ≥2 years at -20°C
Supplied as: A solution in ethanol



Laboratory Procedures

This eicosapentaenoic acid (EPA) Quant-PAK contains 50 µg of EPA-d₅ and 2-4 mg of EPA (please see the vial for exact amount and concentration). For long term storage, we suggest that EPA and EPA-d₅ be stored as supplied at -20°C. They should be stable for at least one year.

EPA and EPA-d₅ 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. EPA is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of EPA in these solvents is 100 mg/ml.

EPA-d₅ is intended for use as an internal standard for the quantification of EPA by GC- or LC-MS. The accuracy of the sample weight in the EPA-d₅ vial is between 5% over and 2% under the weight indicated on the vial. For better precision we have provided a precisely weighed vial of unlabeled EPA, with the precise weight indicated on the vial. Using this vial the deuterated standard can be quantified by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Description

EPA is an ω-3 fatty acid abundantly available in marine organisms. It is oxygenated by COX-1 and COX-2 at rates of about 5% and 30%, respectively, compared to arachidonic acid.¹ EPA has been shown to offer protection against coronary heart disease, thrombosis, ischemic brain injury, scaly dermatitis, and some inflammatory diseases.^{2,3}

References

1. Wada, M., DeLong, C.J., Hong, Y.H., *et al.* Enzymes and receptors of prostaglandin pathways with arachidonic acid-derived versus eicosapentaenoic acid-derived substrates and products. *J. Biol. Chem.* **282**(31), 22254-22266 (2007).
2. Yerram, N.R., Moore, S.A., and Spector, A.A. Eicosapentaenoic acid metabolism in brain microvessel endothelium: Effect on prostaglandin formation. *J. Lipid Res.* **30**, 1747-1757 (1989).
3. Takeuchi, H., Inoue, J., Yoshida, M., *et al.* Dietary effects of n-3 eicosapentaenoic acid on essential fatty acid-deficiency symptoms of rats. *Agric. Biol. Chem.* **53**, 3225-3232 (1989).

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.

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