

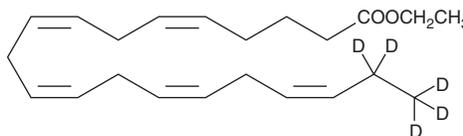
PRODUCT INFORMATION



Eicosapentaenoic Acid-d₅ ethyl ester

Item No. 37972

CAS Registry No.: 2483831-19-0
Formal Name: 5Z,8Z,11Z,14Z,17Z-eicosapentaenoic-19,19,20,20,20-d₅ acid, ethyl ester
Synonyms: EPA-d₅ ethyl ester, SFE 22:5-d₅
MF: C₂₂H₂₉D₅O₂
FW: 335.5
Chemical Purity: ≥95% (Eicosapentaenoic Acid ethyl ester)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
Supplied as: A 1 mg/ml solution in ethanol
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Eicosapentaenoic acid-d₅ ethyl ester is intended for use as an internal standard for the quantification of eicosapentaenoic acid ethyl ester (Item No. 10008884) 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).

Description

Eicosapentaenoic acid (EPA) ethyl ester is an esterified form of the ω-3 fatty acid EPA (Item Nos. 90110 | 90110.1 | 21908). Dietary administration of EPA ethyl ester (41.4 g/100 g of total dietary fatty acids) increases the *ex vivo* activity of hepatic β-oxidation enzymes.^{1,2} It also reduces total hepatic triglyceride levels and increases the ω-3 fatty acid content of hepatic triglycerides and phospholipids, as well as increases the total levels of ω-3 fatty acids in rats. EPA ethyl ester (1 g/kg) reverses increases in plasma cholesterol levels and reduces circulating triglyceride levels in rats fed a high-fat diet.³ Formulations containing eicosapentaenoic acid ethyl ester have been used as adjuncts in the treatment of hypertriglyceridemia.

References

1. Hong, D.D., Takahashi, Y., Kushiro, M., *et al.* Divergent effects of eicosapentaenoic and docosahexaenoic acid ethyl esters, and fish oil on hepatic fatty acid oxidation in the rat. *Biochim. Biophys. Acta* **1635**(1), 29-36 (2003).
2. Arachchige, P.G., Takahashi, Y., and Ide, T. Dietary sesamin and docosahexaenoic and eicosapentaenoic acids synergistically increase the gene expression of enzymes involved in hepatic peroxisomal fatty acid oxidation in rats. *Metabolism* **55**(3), 381-390 (2006).
3. Pérez-Echarri, N., Pérez-Matute, P., Marcos-Gómez, B., *et al.* Down-regulation in muscle and liver lipogenic genes: EPA ethyl ester treatment in lean and overweight (high-fat-fed) rats. *J. Nutr. Biochem.* **20**(9), 705-714 (2008).

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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