

PRODUCT INFORMATION



Eicosapentaenoic Acid ethyl ester-d₅

Item No. 9001244

Formal Name: 5Z,8Z,11Z,14Z,17Z-eicosapentaenoic acid, ethyl ester-d₅

Synonyms: C20:5(5Z,8Z,11Z,14Z,17Z) ethyl ester-d₅, EPA ethyl ester-d₅, Icosapent ethyl-d₅, SFE 22:5-d₅

MF: C₂₂H₂₉D₅O₂

FW: 335.5

Chemical Purity: ≥98% (Eicosapentaenoic Acid ethyl ester)

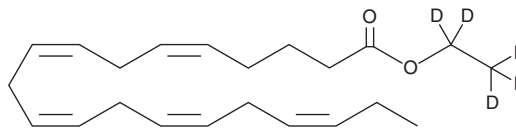
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀

Supplied as: A 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 ethyl ester-d₅ 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).

Eicosapentaenoic acid ethyl ester-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. Solvents such as DMSO and dimethyl formamide purged with an inert gas can be used. The solubility of eicosapentaenoic acid ethyl ester-d₅ in these solvents is approximately 100 mg/ml.

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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