

PRODUCT INFORMATION



Docosahexaenoic Acid-d₅ ethyl ester

Item No. 37971

CAS Registry No.: 159146-01-7

Formal Name: 4Z,7Z,10Z,13Z,16Z,19Z-docosahexaenoic-21,21,22,22,22-d₅ acid, ethyl ester

Synonyms: 4,7,10,13,16,19-Docosahexaenoic Acid-d₅ ethyl ester, C22:6(4Z,7Z,10Z,13Z,16Z,19Z)-d₅ ethyl ester, C22:6 n-3-d₅ ethyl ester, Cervonic Acid-d₅ ethyl ester, DHA-d₅ ethyl ester, SFE 24:6-d₅

MF: C₂₄H₃₁D₅O₂

FW: 361.6

Chemical Purity: ≥95% (docosahexaenoic acid ethyl ester)

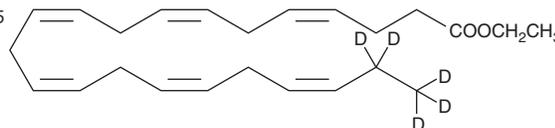
Deuterium

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

Docosahexaenoic Acid-d₅ ethyl ester (DHA-d₅ ethyl ester) is intended for use as an internal standard for the quantification of docosahexaenoic acid ethyl ester 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).

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

Description

DHA-d₅ ethyl ester is an esterified form of the ω-3 fatty acid DHA (Item Nos. 90310 | 17950). DHA ethyl ester increases plasma and erythrocyte membrane DHA levels in rats without altering the content of the ω-6 fatty acid arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607) when administered in the diet at a dose equivalent to 8 mg/kg of DHA.¹ DHA ethyl ester (300 mg/kg per day) reduces the number of reference memory errors in an eight-arm radial maze in 100-week old rats.² Formulations containing DHA ethyl ester, in combination with EPA ethyl ester, have been used as adjuncts in the treatment of hypertriglyceridemia.

References

1. Valenzuela, A., Valenzuela, V., Sanhueza, J., *et al.* Effects of supplementation with docosahexaenoic acid ethyl ester and sn-2 docosahexaenyl monoacylglyceride on plasma and erythrocyte fatty acids in rats. *Ann. Nutr. Metab.* **49(1)**, 49-53 (2005).
2. Gamoh, S., Hashimoto, M., Hossain, S., *et al.* Chronic administration of docosahexaenoic acid improves the performance of radial arm maze task in aged rats. *Clin. Exp. Pharmacol. Physiol.* **28(4)**, 266-270 (2001).

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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