

Certificate of Analysis

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Product Name: Docosahexaenoic acid

Catalog No.: 3687

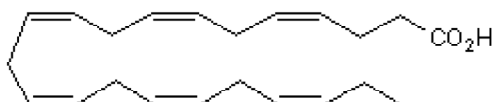
Batch No.: 16

CAS Number: 6217-54-5

IUPAC Name: (4Z,7Z,10Z,13Z,16Z,19Z)-4,7,10,13,16,19-Docosahexaenoic acid

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂H₃₂O₂
Batch Molecular Weight: 328.49
Physical Appearance: Colourless liquid
Solubility: DMSO to 100 mM
 ethanol to 100 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Docosahexaenoic acid is a endogenous omega-3 fatty acid. Acts as a selective retinoid X receptor (RXR) agonist that displays no activity at RAR, thyroid hormone receptor or the vitamin D receptor (VDR). Activates all three RXR isoforms. Also shown to inhibit Aβ₁₋₄₂ fibrillation and toxicity in vitro.

Physical and Chemical Properties:

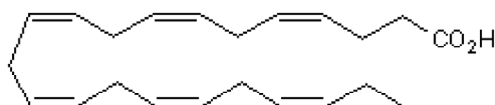
Batch Molecular Formula: C₂₂H₃₂O₂

Batch Molecular Weight: 328.49

Physical Appearance: Colourless liquid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at -20°C. This product is packaged under an inert atmosphere.

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Hossain *et al* (2009) Mechanism of docosahexaenoic acid-induced inhibition of *in vitro* Aβ₁₋₄₂ fibrillation and Aβ₁₋₄₂-induced toxicity in SH-SY5Y cells. *J.Neurochem.* **111** 568. PMID: 19686246.

Zapata-Gonzalez *et al* (2008) Human dendritic cell activities are modulated by the omega-3 fatty acid, docosahexaenoic acid, mainly through PPARγ: RXR heterodimers: comparison with other polyunsaturated fatty acids. *J.Leukoc.Biol.* **84** 1172. PMID: 18632990.

Mata de Urqunia *et al* (2000) Docosahexaenoic acid, a ligand for the retinoid X receptor in mouse brain. *Science* **290** 2140. PMID: 11118147.

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