

## Certificate of Analysis

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**Product Name:** Eicosapentaenoic Acid

**Catalog No.:** 5979

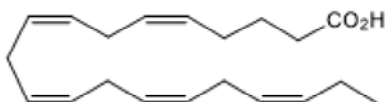
**Batch No.:** 2

CAS Number: 10417-94-4

IUPAC Name: (5Z,8Z,11Z,14Z,17Z)-5,8,11,14,17-Eicosapentaenoic acid

### 1. PHYSICAL AND CHEMICAL PROPERTIES

**Batch Molecular Formula:** C<sub>20</sub>H<sub>30</sub>O<sub>2</sub>  
**Batch Molecular Weight:** 302.45  
**Physical Appearance:** Clear liquid  
**Solubility:** DMSO to 100 mM  
 ethanol to 100 mM  
**Storage:** Store at -20°C  
**Batch Molecular Structure:**



### 2. ANALYTICAL DATA

**GC:** Shows 98.7% purity  
**<sup>1</sup>H 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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Tel: +1 612 379 2956

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**Catalog No.:** 5979

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CAS Number: 10417-94-4

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**Description:**

Endogenous polyunsaturated fatty acid. Stimulates ERK1/2 and C/EBP $\beta$  phosphorylation, and induces demethylation of CpG island B in U937 leukemia cells. Attenuates proliferation of U9137 cells, and induces cell cycle arrest and apoptosis in pancreatic cells in vitro. Also inhibits leukotriene B<sub>4</sub> synthesis in rats.

**Physical and Chemical Properties:**

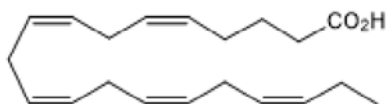
Batch Molecular Formula: C<sub>20</sub>H<sub>30</sub>O<sub>2</sub>

Batch Molecular Weight: 302.45

Physical Appearance: Clear 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. Our standard recommendations are:

**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:**

**Ceccarelli et al** (2014) Eicosapentaenoic acid activates RAS/ERK/C/EBP $\beta$  pathway through H-Ras intron 1 CpG island demethylation in U937 leukemia cells. *PLoS One* **9** e85025. PMID: 24454781 .

**Lai et al** (1996) Cell cycle arrest and induction of apoptosis in pancreatic cancer cells exposed to eicosapentaenoic acid *in vitro*. *Br.J.Cancer* **74** 1375. PMID: 8912532 .

**James et al** (1993) Effect of dietary supplementation with n-9 eicosatrienoic acid on leukotriene B<sub>4</sub> synthesis in rats: a novel approach to inhibition of eicosanoid synthesis. *J.Exp.Med.* **178** 2261. PMID: 8245797.

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