

## Docosahexaenoic Acid methyl ester

## Chemical Properties

CAS No. : 2566-90-7

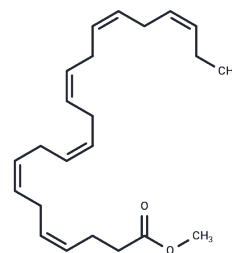
Formula: C<sub>23</sub>H<sub>34</sub>O<sub>2</sub>

Molecular Weight: 342.51

Keep away from direct sunlight, Keep away from moisture, Store at low temperature

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Docosahexaenoic Acid methyl ester (all cis-DHA methyl ester) is a methylated docosahexaenoic acid analog that can be inserted into membrane phospholipids without being oxidized or hydrolyzed.
Targets(IC50)	Others
In vitro	After the application of methyl docosahexaenoate (DHA-Me), the incidence of sharp waves (SPW) relative to baseline appeared to decrease. In the absence of methyl docosahexaenoate (DHA), when bovine serum albumin (BSA) is exposed to a mixed functional oxidation system of Fe <sup>2+</sup> and ascorbic acid (AsA), no new protein bands are produced. However, when BSA was incubated with DHA for only 24 hours, high molecular weight protein bands were observed. The incubation of BSA with 1.0 mM DHA resulted in a substantial increase in protein carbonyl content, while the addition of oxygen free radical scavenger resulted in a significant decrease in protein carbonyl content.

## Solubility Information

Solubility	Ethanol: 100 mg/mL (291.96 mM), Sonication is recommended. DMSO: 120 mg/mL (350.35 mM), Sonication is recommended. ( < 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (5.84 mM), Sonication is recommended. 10% DMSO+90% Saline: 10 mg/mL (29.2 mM), Suspension. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	2.9196 mL	14.5981 mL	29.1962 mL
5 mM	0.5839 mL	2.9196 mL	5.8392 mL
10 mM	0.292 mL	1.4598 mL	2.9196 mL
50 mM	0.0584 mL	0.292 mL	0.5839 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

Taha AY, et al. Selective reduction of excitatory hippocampal sharp waves by docosahexaenoic acid and its methyl ester analog ex-vivo. *Brain Res.* 2013 Nov 6;1537:9-17.

Liu W, et al. Formation of high-molecular-weight protein adducts by methyl docosahexaenoate peroxidation products. *Biochim Biophys Acta.* 2007 Feb;1774(2):258-66.

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481