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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Docosahexaenoic acid methyl ester

Cat. No.: HY-101541

CAS No.: 2566-90-7

Molecular Formula: $C_{23}H_{34}O_2$

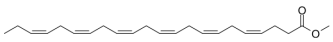
Molecular Weight: 342.51

Target: Others

Pathway: Others

Storage:

Pure form	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

Ethanol : 100 mg/mL (291.96 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.9196 mL	14.5981 mL	29.1962 mL
	5 mM	0.5839 mL	2.9196 mL	5.8392 mL
	10 mM	0.2920 mL	1.4598 mL	2.9196 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (7.30 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.30 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Docosahexaenoic Acid methyl ester is a methylated docosahexaenoic acid analog which can be intercalated into membrane phospholipids without being oxidized or hydrolyzed.

In Vitro

Sharp wave (SPW) incidence relative to baseline appears to decrease following Docosahexaenoic Acid methyl ester (DHA-Me) application[1]. There is no generation of a new protein band when bovine serum albumin (BSA) is exposed to the Fe^{2+} and ascorbic acid (AsA) mixed-function oxidation system in the absence of Docosahexaenoic Acid methyl ester (DHA). However, the high-molecular-weight protein band is observed after only 24 h when BSA is incubated with DHA. Incubation of BSA with 1.0 mM DHA leads to a substantial increase in protein carbonyl content and the addition of oxygen radical scavengers leads to a substantial decrease in protein carbonyl content[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [2]

Protein (1 mg/mL) is incubated with Docosahexaenoic Acid methyl ester (DHA) (1.0 mM) in 50 mM HEPES buffer (pH 7.4) containing 0.2% (w/v) of Tween 20 at 37°C. Mannitol, histidine, sodium benzoate, or KI is added at final concentration of 0.5 M, 0.2 M, 0.5 M, or 0.1 M, respectively. Reactive oxygen species are generated by addition of $FeSO_4$ (1 μM) and ascorbic acid (AsA, 20 μM)[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. 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.

[2]. 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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