Docosahexaenoic acid ethyl ester

Cat. No.: HY-107343

CAS No.: 81926-94-5

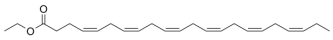
Molecular Formula: $C_{24}H_{36}O_2$

Molecular Weight: 356.54

Target: Others

Pathway: Others

Storage: -20°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (280.47 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	2.8047 mL	14.0237 mL	28.0473 mL
	5 mM	0.5609 mL	2.8047 mL	5.6095 mL
	10 mM	0.2805 mL	1.4024 mL	2.8047 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 (7.01 mM); Suspended solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: 2.5 mg/mL (7.01 mM); Suspended solution; Need ultrasonic
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.01 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Docosahexaenoic acid ethyl ester (Ethyl docosahexaenoate) is a 90% concentrated ethyl ester of docosahexaenoic acid manufactured from the microalgal oil. Docosahexaenoic acid ethyl ester enhances 6-hydroxydopamine-induced neuronal damage by induction of lipid peroxidation in mouse striatum. Docosahexaenoic acid (DHA) is a key component of the cell membrane, and its peroxidation is inducible due to the double-bond chemical structure. Docosahexaenoic acid has neuroprotective effects[1][2].

In Vivo

Docosahexaenoic acid ethyl ester (DHA-EE) (500 mg/kg; IP; once daily for 7 days) enhances 6-OHDA-induced reduction of striatal dopamine level[2].

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

REFERENCES

[1]. Dahms I, et al. Safety of docosahexaenoic acid (DHA) administered as DHA ethyl ester in a 9-month toxicity study in dogs. Food Chem Toxicol. 2016;92:50-57.

[2]. Kabuto H, et al. Docosahexaenoic acid ethyl ester enhances 6-hydroxydopamine-induced neuronal damage by induction of lipid peroxidation in mouse striatum. Neurochem Res. 2009;34(7):1299-1303.

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