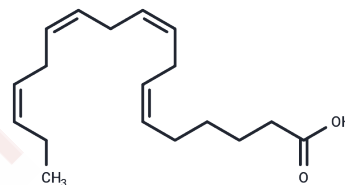


Stearidonic Acid

Chemical Properties

CAS No. :	20290-75-9
Formula:	C ₁₈ H ₂₈ O ₂
Molecular Weight:	276.41
Storage:	Store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	Stearidonic Acid (6Z,9Z,12Z,15Z-Octadecatetraenoic acid) is a plant-based omega-3 fatty acid extracted from brown algae, a precursor in the biosynthetic pathway, used for Alzheimer's disease research.
Targets(IC50)	Endogenous Metabolite
In vitro	HepG2 cells were incubated with Stearidonic Acid (50 µmol/L), which increased total cellular PUFA, and Stearidonic Acid led to a significant increase in EPA levels, while DHA levels were not affected by Stearidonic Acid. [1] Stearidonic Acid (100 µmol/L) can be efficiently converted to EPA in rat hippocampal cells. Stearidonic Acid has A neuroprotective effect in preventing Aβ-induced mitochondrial dysfunction and neuronal death in vitro. [2]
In vivo	Stearidonic Acid mitigated the negative effects of a high-calorie diet on cardiovascular and neurological function in a rat model. [3]

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6178 mL	18.0891 mL	36.1781 mL
5 mM	0.7236 mL	3.6178 mL	7.2356 mL
10 mM	0.3618 mL	1.8089 mL	3.6178 mL
50 mM	0.0724 mL	0.3618 mL	0.7236 mL

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

Seidel U, et al. Stearidonic acid improves eicosapentaenoic acid status: studies in humans and cultured hepatocytes. *Front Nutr.* 2024 Apr 4;11:1359958.

Li Y, et al. Neuroprotective Effect of Stearidonic Acid on Amyloid β -Induced Neurotoxicity in Rat Hippocampal Cells. *Antioxidants (Basel).* 2022 Nov 28;11(12):2357.

Cardoso C, et al. Stearidonic acid combined with alpha-linolenic acid improves lipemic and neurological markers in a rat model subject to a hypercaloric diet. *Prostaglandins Leukot Essent Fatty Acids.* 2018 Aug;135:137-146.

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