

Delta-Tocopherol

Chemical Properties

CAS No. : 119-13-1

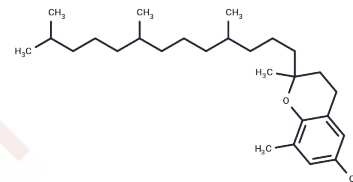
Formula: C₂₇H₄₆O₂

Molecular Weight: 402.65

Store at low temperature, Keep away from direct sunlight

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	Delta-Tocopherol, an isomer of Vitamin E, possesses antioxidant activity and may serve as an effective ingredient in whitening cosmetics with reduced skin toxicity.
Targets(IC50)	Apoptosis, Endogenous Metabolite
In vitro	D-beta-tocopherol at 250 µg ml ⁻¹ inhibited not only 28% of melanin synthesis in B16 cells, but also 34% of the tyrosinase activity, a very important cascade enzyme involved in the synthesis of melanin in melanoma cells. D-gamma-tocopherol also strongly inhibited up to 39% of melanin synthesis and 45% of the tyrosinase enzyme activity at the same concentration.

Solubility Information

Solubility	DMSO: 122.5 mg/mL (304.23 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 10 mg/mL (24.84 mM), Solution. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (9.93 mM), Sonication is recommended. <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

	1mg	5mg	10mg
1 mM	2.4835 mL	12.4177 mL	24.8355 mL
5 mM	0.4967 mL	2.4835 mL	4.9671 mL
10 mM	0.2484 mL	1.2418 mL	2.4835 mL
50 mM	0.0497 mL	0.2484 mL	0.4967 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

Kamei Y , Otsuka Y , Abe K . Comparison of the inhibitory effects of vitamin E analogues on melanogenesis in mouse B16 melanoma cells[J]. Cytotechnology, 2009, 59(3):183-190.

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