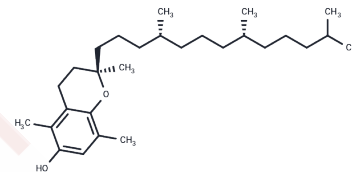


β -Tocopherol

Chemical Properties

CAS No. :	16698-35-4
Formula:	C ₂₈ H ₄₈ O ₂
Molecular Weight:	416.68
Storage:	Keep away from direct sunlight 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	β -Tocopherol, a vitamin E analog with antioxidant activity, inhibits tyrosinase activity and melanin production while suppressing PMA-induced human erythrocyte adhesion.
Targets(IC ₅₀)	Melanocortin Receptor, Tyrosinase
In vitro	β -Tocopherol (250 μ g/mL, 72 h) can downregulate the expression levels of tyrosinase and tyrosinase-related protein-2, thereby inhibiting melanin synthesis by 28%, with no significant cytotoxicity observed in B16 cells at this concentration [3]. β -Tocopherol (50 μ M, 24 h) suppresses PMA-induced adhesion of human erythroleukemia cells and reduces the expression levels of integrin α 4 and α 5 on the cell surface [4].

Solubility Information

Solubility	DMSO: 80 mg/mL (191.99 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3999 mL	11.9996 mL	23.9992 mL
5 mM	0.480 mL	2.3999 mL	4.7998 mL
10 mM	0.240 mL	1.200 mL	2.3999 mL
50 mM	0.048 mL	0.240 mL	0.480 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

Azzi A, et, al. d-alpha-tocopherol control of cell proliferation. Mol Aspects Med. 1993; 14(3): 265-71.

Tasinato A, et, al. d-alpha-tocopherol inhibition of vascular smooth muscle cell proliferation occurs at physiological concentrations, correlates with protein kinase C inhibition, and is independent of its antioxidant properties. Proc Natl Acad Sci U S A. 1995 Dec 19; 92(26): 12190-4.

Kamei Y, et, al. Comparison of the inhibitory effects of vitamin E analogues on melanogenesis in mouse B16 melanoma cells. Cytotechnology. 2009 Apr; 59(3): 183-90.

Breyer I, et al., Differential inhibition by alpha- and beta-tocopherol of human erythroleukemia cell adhesion: role of integrins. Free Radic Biol Med. 2001 Jun 15;30(12):1381-9.

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