

α -Vitamin E

Chemical Properties

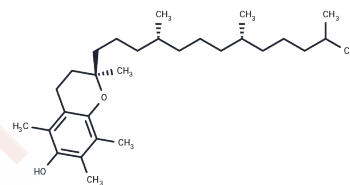
CAS No. : 59-02-9

Formula: C₂₉H₅₀O₂

Molecular Weight: 430.71

Keep away from direct sunlight, Store under nitrogen
 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	α -Vitamin E (Dexrabepazole Sodium) is a naturally-occurring form of vitamin E, a fat-soluble vitamin with potent antioxidant properties.
Targets(IC50)	Ferroptosis, Reactive Oxygen Species, Endogenous Metabolite, Antibacterial, GST, Influenza Virus, PKC, ROS
In vitro	vitamin E is capable of inducing necrosis in TC-1 cells and has antioxidant effects against nitric oxide[1].
In vivo	Vitamin E induces TC-1 cell necrosis in vivo and reduces tumor volume in TC-1 tumor-bearing mice. Vitamin E reduces myeloid derived suppressor cells(MDSCs) in tumors of TC-1 tumor-bearing mice and enhances T cell accumulation[1].
Cell Research	For in vitro cytotoxicity experiments, 1×10 ⁵ TC-1 cells per well are added to 24-well plates. Eighteen hours later, tumor cells are treated with Vitamin E (0, 25, 50 μ M). After 18 hours, apoptotic (Annexin V+ and 7AAD-) and necrotic (Annexin V+ and 7AAD+) cells are measured using PE Annexin V Apoptosis Detection Kit I. (Only for Reference)

Solubility Information

Solubility	DMSO: 262.5 mg/mL (609.46 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1.2 mg/mL (2.79 mM), Solution. Saline: 25 mg/mL (58.04 mM), Solution. <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	2.3217 mL	11.6087 mL	23.2175 mL
5 mM	0.4643 mL	2.3217 mL	4.6435 mL
10 mM	0.2322 mL	1.1609 mL	2.3217 mL
50 mM	0.0464 mL	0.2322 mL	0.4643 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

Kang TH, et al. PLoS One. 2014, 9(7):e103562.

Wang S, Li F, Qiao R, et al. Arginine-Rich Manganese Silicate Nanobubbles as a Ferroptosis-Inducing Agent for Tumor-Targeted Theranostics. ACS nano. 2018 Dec 26;12(12):12380-12392.

Wang S, Li F, Qiao R, et al. Arginine-Rich Manganese Silicate Nanobubbles as a Ferroptosis-Inducing Agent for Tumor-Targeted Theranostics[J]. ACS nano. 2018 Dec 26;12(12):12380-12392.

He F, Huang X, Wei G, et al. Regulation of ACSL4-Catalyzed Lipid Peroxidation Process Resists Cisplatin Ototoxicity. Oxidative Medicine and Cellular Longevity. 2022

Zhang H, Liang B, Sang X, et al. Discovery of Potential Inhibitors of SARS-CoV-2 Main Protease by a Transfer Learning Method. Viruses. 2023, 15(4): 891.

Ning X, Chen X, Li R, et al. Identification of a Novel Cuproptosis Inducer That Induces ER Stress and Oxidative Stress to Trigger Immunogenic Cell Death in Tumors. Free Radical Biology and Medicine. 2025

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481