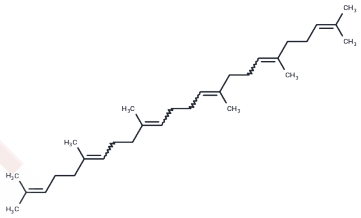
Data Sheet (Cat.No.T4749)

TargetMol

Squalene

Chemical Properties



CAS No. : 111-02-4

Formula: C30H50

Molecular Weight: 410.72

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	Squalene (AddaVax) is an intermediate in cholesterol synthesis. Squalene has a variety of pharmacological properties, such as antilipemic, hepatoprotective, anti-atherosclerotic, cardioprotective, antioxidant, antitumor and antifungal.
Targets(IC50)	Reactive Oxygen Species,Endogenous Metabolite,Antifungal,ROS
In vitro	**METHODS**: Human MCF7, NCI-H460, and SF-268 cells were treated with Squalene (0-50 μM) for 72 hours, and MTS reduction assay was used to detect cell growth inhibition. **RESULTS**: Squalene did not inhibit the proliferation of MCF7, NCI-H460 and SF-268 cells (IC50>50 μM). [1] **METHODS**: MCF10A epithelial cells were treated with Squalene (12.5, 50, and 200 μM) for 24 hours, and ROS levels were measured using a microplate reader. **RESULTS**: Squalene reduced intracellular ROS levels. [2]
In vivo	**METHODS**: To study the effect of Squalene on lipid parameters, mice were fed a diet containing Squalene (0.25-1 g/kg) for 11 weeks. **RESULTS**: Squalene promoted the changes of HDL-cholesterol and paraoxonase 1, and decreased the reactive oxygen species in lipoproteins and plasma malondialdehyde levels. [3]

Solubility Information

Solubility	Ethanol: 100 mg/mL (243.47 mM) DMSO: 100 mg/mL (243.47 mM) (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (8.03 mM),Sonication is recommended. *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.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4347 mL	12.1737 mL	24.3475 mL
5 mM	0.4869 mL	2.4347 mL	4.8695 mL
10 mM	0.2435 mL	1.2174 mL	2.4347 mL
50 mM	0.0487 mL	0.2435 mL	0.4869 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

Chou TH, et al. Cytotoxic flavonoids from the leaves of Cryptocarya chinensis. J Nat Prod. 2010 Sep 24;73(9):1470-5.

Liu Y, Wang Z, Jin H, et al.Squalene-epoxidase-catalyzed 24 (S), 25-epoxycholesterol synthesis promotes trained-immunity-mediated antitumor activity.Cell Reports.2024, 43(4).

Warleta F, et al. Squalene protects against oxidative DNA damage in MCF10A human mammary epithelial cells but not in MCF7 and MDA-MB-231 human breast cancer cells. Food Chem Toxicol. 2010 Apr;48(4):1092-100.

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