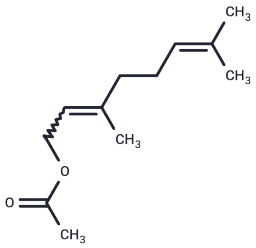
Data Sheet (Cat.No.T5607)

TargetMol

Geranyl acetate

Chemical Properties



CAS No. : 105-87-3

Formula: C12H20O2

Molecular Weight: 196.29

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Geranyl acetate is a monoterpene that has been found in C. sativa with diverse biological activities.
Targets(IC50)	Apoptosis
In vitro	Studies on the antifungal activity especially Microsporum gypsum, Trichophyton vercossum and Candida tropicalis showed that geranyl acetate, its epoxide and hydroperoxide derivatives have good antifungal action[1].Geranyl acetate exhibited significant anticancer activity against colo-205 cancer cell line with IC50 values of 30 μM . To find out the underlying mechanism, DAPI staining was carried out and it was observed that both the monoterpenes, geraniol and geranyl acetate, induced apoptosis in colo-205 cells. The apoptosis was also associated with upregulation of Bax and downregulation of Bcl-2 expressions, indicative of mitochondrial apoptosis. Moreover, this monoterpenes could trigger DNA damage and G2/M cell cycle arrest in colo-205 cells[1].
Cell Research	The antiproliferative activity was determined by MTT assay. Apoptosis was assessed by DAPI staining and DNA damage was checked by comet assay. The cell cycle analysis was carried out by flow cytometry and protein expression was examined by western blotting.[1].

Solubility Information

Solubility	DMSO: 250 mg/mL (1273.63 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: 2 mg/mL (10.19 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	5.0945 mL	25.4725 mL	50.945 mL
5 mM	1.0189 mL	5.0945 mL	10.189 mL
10 mM	0.5095 mL	2.5473 mL	5.0945 mL
50 mM	0.1019 mL	0.5095 mL	1.0189 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

Qi F , Yan Q , Zheng Z , et al. Geraniol and geranyl acetate induce potent anticancer effects in colon cancer Colo-205 cells by inducing apoptosis, DNA damage and cell cycle arrest[J]. Journal of Buon, 2018, 23(2):346-352.
Khayyat S A , Sameeh M Y . Bioactive epoxides and hydroperoxides derived from naturally monoterpene geranyl acetate[J]. Saudi Pharmaceutical Journal, 2018, 26(1):14-19.