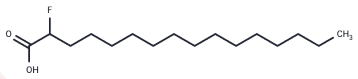
Data Sheet (Cat.No.T21842)

TargetMol

2-Fluoropalmitic acid

Chemical Properties



CAS No. : 16518-94-8

Formula: C16H31FO2

Molecular Weight: 274.41

Storage: Store at low temperature
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	2-Fluoropalmitic acid (2-Fluorohexadecanoic acid), a fatty acid containing fluorine atoms, serves as a potential therapeutic agent for glioblastoma (GBM) by inhibiting the viability, proliferation, and stem-like phenotype of glioma stem cells (GSCs), suppressing the expression of phosphorylated erk, CD133, and SOX-2, and leading to decreased MMP-2 activity and increased methylation of the MGMT promoter.
Targets(IC50)	MMP,ERK,Acyltransferase,Integrin
In vitro	After incubating 2-Fluoropalmitic acid with human leukemia cell lines (such as MOLT-4) and normal fibroblasts (HDF cells), cell viability was assessed using the MTT assay, and apoptosis was observed by flow cytometry or fluorescence microscopy. The **Results** showed that 2-Fluoropalmitic acid (concentration range of 12.5-50 μg/ml) exhibited significant cytotoxicity against human leukemia cell lines (such as MOLT-4), but had no obvious toxicity to normal fibroblasts (HDF cells), with minimal impact on normal cells, while it was able to induce apoptosis in cancer cells[1].

Solubility Information

Solubility	DMSO: 80 mg/mL (291.53 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 3.3 mg/mL (12.03 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	3.6442 mL	18.2209 mL	36.4418 mL
5 mM	0.7288 mL	3.6442 mL	7.2884 mL
10 mM	0.3644 mL	1.8221 mL	3.6442 mL
50 mM	0.0729 mL	0.3644 mL	0.7288 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

Harada H,et al.Antitumor activity of palmitic acid found as a selective cytotoxic substance in a marine red alga[J]. Anticancer research, 2001, 22(5): 2587-2590.