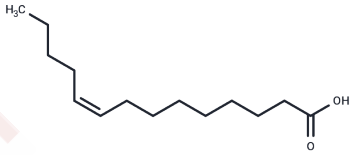
Data Sheet (Cat.No.T41288)

TargetMol

Myristoleic acid

Chemical Properties



CAS No. : 544-64-9

Formula: C14H26O2

Molecular Weight: 226.35

Storage: Store at low temperature,Keep away from moisture
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	Myristoleic acid (9-Tetradecenoic acid) is a cytotoxic component in the extract from Serenoa repens. Myristoleic acid induces apoptosis and necrosis in human prostatic LNCaP cells.
Targets(IC50)	Apoptosis,Endogenous Metabolite
In vitro	Myristoleic acid induces both necrosis (100 μg/mL, 81.8%) and apoptosis (100 μg/mL, 89.5%) in LNCaP cells [1]. Myristoleic acid inhibited RANKL-induced osteoclast formation in vitro, especially, at later stages of differentiation [2].
In vivo	Myristoleic acid (2 mg/kg, IP every 24 h for 4 days) inhibits RANKL-induced bone loss and osteoclast formation in mice [2].

Solubility Information

Solubility	DMSO: 100 mg/mL (441.79 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: 3.3 mg/mL (14.58 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	4.4179 mL	22.0897 mL	44.1794 mL
5 mM	0.8836 mL	4.4179 mL	8.8359 mL
10 mM	0.4418 mL	2.209 mL	4.4179 mL
50 mM	0.0884 mL	0.4418 mL	0.8836 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

Xiaoyan Gao, et al. Ozone initiated heterogeneous oxidation of unsaturated carboxylic acids by ATR-FTIR spectroscopy. Spectrochim Acta A Mol Biomol Spectrosc. 2019 May 5;214:177-183.
Jun-Oh Kwon, et al. Myristoleic acid inhibits osteoclast formation and bone resorption by suppressing the RANKL activation of Src and Pyk2. Eur J Pharmacol. 2015 Dec 5;768:189-98.