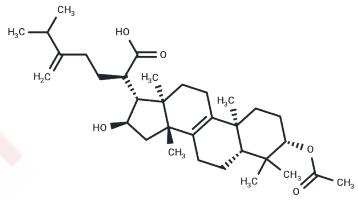
Data Sheet (Cat.No.T6S0619)

TargetMol

Pachymic acid

Chemical Properties



CAS No. : 29070-92-6

Formula: C33H52O5

Molecular Weight: 528.76

Storage: Keep away from direct sunlight,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	Pachymic acid (3-O-Acetyltumulosic acid) is a natural product, and inhibits Akt and ERK signaling pathways.
Targets(IC50)	ERK,Akt
In vitro	Porinic acid (PA) exerted antitumor effects on NCI-H23 and NCI-H460 lung cancer cells in vitro, while inducing cellular G2/M phase arrest and apoptosis. Our data showed that PA induced reactive oxygen species (ROS) production, leading to activation of c-Jun N-terminal kinase (JNK) and endoplasmic reticulum (ER) stress apoptotic pathways in lung cancer cells. Furthermore, blocking ROS production reversed PA-induced JNK and ER stress activation. Finally, PA inhibited the growth of NCI-H23 xenograft tumors without causing any toxicity to the host, and suppressed cell proliferation and induced apoptosis in tumor xenograft tissues [1]. At the same time, PA induced cell cycle arrest at G0 phase.PA also significantly inhibited cancer cell migration and invasion in a dose-dependent manner. Interestingly, PA inhibited the adhesion ability of cancer cells in a dose-dependent manner, which may contribute to the inhibition of cell invasion. Finally, it was shown that PA inhibited AKT and ERK signaling pathways. And tumor proteins such as PCNA, ICAM-1 and RhoA, which are involved in tumorigenesis, were also down-regulated by PA [1].
Cell Research	The anti-proliferative ability of PA on lung cancer cells was assessed by MTT, colony formation and EdU proliferation assays; cell cycle changes were detected by flow cytometry; apoptosis was detected by annexin V/PI double staining and DNA laddering; and the expression of apoptosis-related proteins was analyzed by Western blotting [1].

Solubility Information

Solubility	DMSO: 9.52 mg/mL (18 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.8912 mL	9.4561 mL	18.9122 mL
5 mM	0.3782 mL	1.8912 mL	3.7824 mL
10 mM	0.1891 mL	0.9456 mL	1.8912 mL
50 mM	0.0378 mL	0.1891 mL	0.3782 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

Ma J, et al. Pachymic acid induces apoptosis via activating ROS-dependent JNK and ER stress pathways in lung cancer cells. Cancer Cell Int. 2015 Aug 5;15:78.
Chen Y, et al. Pachymic acid inhibits tumorigenesis in gallbladder carcinoma cells. Int J Clin Exp Med. 2015 Oct 15;8 (10):17781-8.