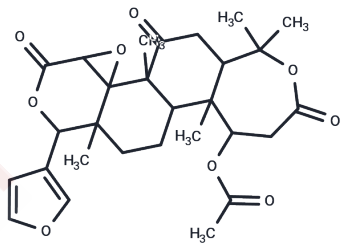
Data Sheet (Cat.No.T3672)

TargetMol

Nomilin

Chemical Properties



CAS No. : 1063-77-0

Formula: C28H34O9

Molecular Weight: 514.56

Storage: Keep away from direct sunlight
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	Nomilin is naturally occurring triterpenoids, have immunomodulatory activity.
Targets(IC50)	MAPK
In vitro	Administration of Nomilin significantly retarded endothelial cell proliferation, invasion, migration and tube formation. It also possesses anti-proliferative activity against the number of human cancer cell lines including leukemia (HL-60), ovary (SKOV-3), liver (Hep G2), cervix (HeLa), stomach (NCI-SNU-1), and breast (MCF-7)[2]. Nomilin significantly decreased TRAP-positive multinucleated cell numbers compared with the control and exhibited no cytotoxicity. It decreases bone resorption activity and downregulates osteoclast-specific genes, NFATc1 and TRAP mRNA levels. Furthermore, Nomilin suppressed MAPK signaling pathways. Thus, Nomilin has inhibitory effects on osteoclastic differentiation in vitro[3].
In vivo	Nomilin is an effective inducer of gluthathione S-transferase activity in mice and to inhibit carcinogenesis in the hamster buccal pouch assay. Nomilin can shorten anaesthetic-induced sleeping time in mice, probably through a stimulant action on the central nervous system [1]. Nomilin significantly inhibited tumour-directed capillary formation. Serum proinflammatory cytokines such as IL-1β, IL-6, TNF-α and GM-CSF and also serum NO levels were significantly reduced by the treatment of nomilin. Administration of Nomilin significantly reduced the serum level of VEGF, a proangiogenic factor and increased the antiangiogenic factors TIMP-1 and IL-2 [2].
Cell Research	Cell lines: HUVECs. Concentrations: 5 μg-500 μg/ml. Incubation Time: 48 h. Method:. HUVECs were seeded (5000 cells/well) in 96-well flat-bottomed titer plate and incubated for 24 h at 37 °C in 5% CO2 atmosphere. Different concentrations of Nomilin (5 μg-500 μg/ml) were added and incubated further for 48 h. Before 4 h completion of incubation, 20 μl MTT (5 mg/ml) was added. Percentage of dead cells was determined using an ELISA plate reader set to record absorbance at 570 nm.
Animal Research	Animal Models: Four to six week old male C57BL/6 mice. Formulation: light paraffin oil. Dosages: 6 mg/kg, I.P.

Solubility Information

Solubility	H2O: Insoluble, Ethanol: Insoluble, DMSO: 125 mg/mL (242.93 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 (3.89 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	1.9434 mL	9.717 mL	19.4341 mL
5 mM	0.3887 mL	1.9434 mL	3.8868 mL
10 mM	0.1943 mL	0.9717 mL	1.9434 mL
50 mM	0.0389 mL	0.1943 mL	0.3887 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

Battinelli L, et al. Effect of limonin and nomilin on HIV-1 replication on infected human mononuclear cells.[J]. Planta Medica, 2003, 69(10):910-913.
Pratheeshkumar P, et al. Nomilin inhibits tumor-specific angiogenesis by downregulating VEGF, NO and proinflammatory cytokine profile and also by inhibiting the activation of MMP-2 and MMP-9[J]. European Journal of Pharmacology, 2011, 668(3):450-458.
Kimira Y, et al. Citrus limonoid nomilin inhibits osteoclastogenesis in vitro by suppression of NFATc1 and MAPK signaling pathways.[J]. Phytomedicine, 2015, 22(12):1120-1124.