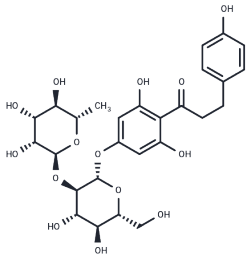
Data Sheet (Cat.No.T2761)

TargetMol

Naringin dihydrochalcone

Chemical Properties



CAS No. : 18916-17-1

Formula: C27H34O14

Molecular Weight: 582.55

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	Naringin dihydrochalcone (Naringin DC) is an inhibitor of CYP enzymes, used as an artificial sweetener.
Targets(IC50)	NF-κB,Cytochromes P450
In vitro	Naringin Dihydrochalcone(Naringin DC) is a new-style sweetening agent and an artificial sweetener derived from naringin, a bitter compound found in citrus. [1] It is 500-700 times sweeter than sucrose. Due to its many advantages like high sweet taste, low caloric, innocuity and safety, it can be used in edible, medicine and commodity trade. And because it tastes cleanlily, has long aftertaste and special faint scent and owns fine virtue of shielding bitterness, Naringin DC is in particular used for milky goods, fattiness and grease, freezed foodstuff, machining vegetable, jelly, comfiture, nonalcohol beverage, chewing gum, toothpaste and troche. Besides, it can substitute sugar for decreasing body absorption to sugar. It is really a evangel for fat person and patients who can not eat sugar.
In vivo	Treatment with naringin significantly alleviates renal injury in diabetic rats and increases diabetic rats body weight significantly. Administration of naringin effectively alleviates the collagen deposition and renal interstitial fibrosis in diabetic rats. Treatment with naringin could cause decreased levels of ROS and MDA and increased activities of SOD and GSH-Px[2]. Oral administration of naringin significantly improves the learning and memory abilities. Naringin significantly enhances insulin signaling pathway[3].
Cell Research	HBZY-1 cells are plated into 96-well plates and pretreated with various concentrations (1, 5, 10, 25, 50, 100 μM) of naringin for 2 h. Then cells are treated with 30 mM glucose for 24 h. The control group is added sterile normal saline in the same volume. After treatment, all the wells are incubated with 20 μl of 5 mg/ml MTT for 4 h at 37°C. Subsequently, 100 μl of DMSO are used to dissolve the formed formazan crystals after removal of the supernatant. The result is recorded at 490 nm on a microplate reader[1].

Solubility Information

Solubility	H2O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 93 mg/mL (159.64 mM),Sonication is recommended. DMSO: 250 mg/mL (429.15 mM),Sonication is recommended.

Solubility	(< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (17.17 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	1.7166 mL	8.583 mL	17.1659 mL
5 mM	0.3433 mL	1.7166 mL	3.4332 mL
10 mM	0.1717 mL	0.8583 mL	1.7166 mL
50 mM	0.0343 mL	0.1717 mL	0.3433 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

Shin W, et al. J Med Chem, 1995, 38(21), 4325-4331.
Chen F, et al. Naringin Alleviates Diabetic Kidney Disease through Inhibiting Oxidative Stress and Inflammatory Reaction. PLoS One. 2015 Nov 30;10(11):e0143868.
Kulasekaran G, et al. Neuroprotective efficacy of naringin on 3-nitropropionic acid-induced mitochondrial dysfunction through the modulation of Nrf2 signaling pathway in PC12 cells. Mol Cell Biochem. 2015 Nov;409(1-2): 199-211.