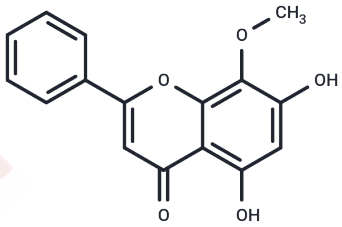
Data Sheet (Cat.No.T2933)

TargetMol

Wogonin

Chemical Properties



CAS No. : 632-85-9

Formula: C16H12O5

Molecular Weight: 284.26

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	Wogonin (Vogonin) is a cell-permeable and orally available flavonoid that displays anti-inflammatory and anticancer properties.
Targets(IC50)	Apoptosis,CDK,Autophagy,Wnt/beta-catenin
In vitro	Wogonin inhibits PMA-induced COX-2 gene expression by inhibiting c-Jun expression and AP-1 activation in A549 cells[1]. Wogonin is an inhibitor of cyclin-dependent kinase 9 (CDK9) and block phosphorylation of the carboxy-terminal domain of RNA polymerase II at Ser. Thus, it reduces RNA synthesis and subsequently rapid downregulation of the short-lived anti-apoptotic protein myeloid cell leukemia 1 (Mcl-1) resulting in apoptosis induction in cancer cells. Wogonin directly binds to CDK9, presumably to the ATP-binding pocketa and does not inhibit CDK2, CDK4 and CDK6 at doses that inhibit CDK9 activity. Wogonin preferentially inhibits CDK9 in malignant compared with normal lymphocytes. Wogonin is a also potent anti-oxidant capable to scavenge ?O2? [2]. Wogonin significantly inhibits the translocation of NFATc1 from the cytoplasm to the nucleus and its transcriptional activation activity. It also significantly inhibits osteoclast differentiation and decreases the transcription of osteoclast?associated immunoglobulin?like receptor, tartrate?resistant acid phosphatase and calcitonin receptor[4]. Wogonin Inhibits N-acetyltransferase Activity[5].
In vivo	Wogonin suppresses growth of human cancer xenografts in vivo. At doses lethal to tumor cells, wogonin shows no or little toxicity for normal cells and had also no obvious toxicity in animals[2]. Wogonin could induce apoptosis in murine sarcoma S180 thereby inhibiting the tumor growth both in vitro and in vivo[3]. An intraperitoneal injection of 200 mg/kg Wogonin could completely inhibit leukemia and CEM cells[4].
Cell Research	A549 cells are culture in 24-well plate (1.2×105 cells/well) 1 day before wogonin treatment. DMSO or wogonin is added into A549 cells 1 h before PMA stimulation, and cells are incubated for another 6 h. Cells are collected by trypsin treatment and cell numbers are counted by using a hemocytometer and trypan blue exclusion method. (Only for Reference)

Solubility Information

Solubility	DMSO: 62 mg/mL (218.11 mM),Sonication is recommended. Ethanol: 3 mg/mL (10.55 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.5179 mL	17.5895 mL	35.1791 mL
5 mM	0.7036 mL	3.5179 mL	7.0358 mL
10 mM	0.3518 mL	1.759 mL	3.5179 mL
50 mM	0.0704 mL	0.3518 mL	0.7036 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

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Polier G, et al. Cell Death Dis. 2011, 2:e182.
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