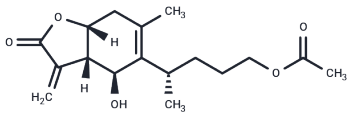
Data Sheet (Cat.No.TQ0169)

TargetMol
YOUR TARGET MOLECULES

Inulicin

Chemical Properties



CAS No. : 33627-41-7

Formula: C17H24O5

Molecular Weight: 308.37

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Inulicin (1-O-Acetylbritannilactone), an active compound isolated from Inula Britannica L, inhibits VEGF-mediated activation of Src and FAK.
Targets(IC50)	FAK,NF-κB,COX,Src
In vitro	Inulicin (1-O-Acetylbritannilactone) inhibits angiogenesis and lung cancer cell growth through regulating VEGF-Src-FAK signaling. Inulicin dose-dependently inhibits vascular endothelial growth factor (VEGF)-induced proliferation, migration, and capillary structure formation of cultured human umbilical vascular endothelial cells (HUVECs). Significant high levels of Src and FAK phosphorylations are noticed in A549 cells, which are both inhibited by the treatment of Inulicin (5 μM and 10 μM). Src and FAK are both important for cancer cell proliferation. Thus, A549 cell growth, tested by MTT assay and clonogenicity assay, is remarkably inhibited by corresponding Inulicin treatment. The anti-A549 cell growth activity of Inulicin is again dose-dependent [1]. Inulicin (5, 10, 20 μM) has several concentration-dependent effects, including inhibition of lipopolysaccharide (LPS)-induced PGE2 production and COX-2 expression, and blockade of NF-κB activation and translocation. In addition, Inulicin directly inhibits the binding of active NF-κB to specific DNA cis-element [2].
In vivo	Administration of a single dose of Inulicin (12 mg/kg/day) remarkably suppresses the growth of A549 xenografts in nude mice. In vivo, microvessels formation and Src activation are also significantly inhibited in Inulicin-treated xenograft tumors. A single dose of Inulicin (12 mg/kg/day, i.p.) dramatically inhibits the growth of A549 xenografts in nude mice. Further, the weights of Inulicin-treated tumors are remarkably lighter than that of vehicle-treated tumors [1].
Cell Research	HUVECs or A549 cells are plated in 60 mm plates (300 cells/plate). After overnight incubation, cells are treated with applied agents (Inulicin; 5 μM and 10 μM) for 24 h. Cells are then washed, and fresh media are added. After 10 days of incubation, surviving colonies are fixed, stained, and manually counted [1].
Animal Research	Male nude mice (4-6weeks old, BALB/c) are used. A549 cells (five million cells in 0.1 mL of culture medium) are subcutaneously injected at the right thigh of nude mice, and treatment is started when the tumors reach an average volume of about 100 mm3. Animals are randomized into two groups with 10 mice per group: (a) Vehicle; (b) 12 mg/kg of Inulicin. Inulicin is injected intraperitoneally (i.p.) daily. The mice are examined daily for toxicity/mortality relevant to treatment, and the tumor is measured with a

caliper every two days. The tumor volume (in mm3) is calculated, and the tumor growth curve is presented. At the end of experiments, xenograft tumors are isolated through surgery and weighted [1].

Solubility Information

Solubility	Ethanol: 45 mg/mL (145.93 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2429 mL	16.2143 mL	32.4286 mL
5 mM	0.6486 mL	3.2429 mL	6.4857 mL
10 mM	0.3243 mL	1.6214 mL	3.2429 mL
50 mM	0.0649 mL	0.3243 mL	0.6486 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.

Reference

Zhengfu H, et al. 1-o-acetylbritannilactone (ABL) inhibits angiogenesis and lung cancer cell growth through regulating VEGF-Src-FAK signaling. Biochem Biophys Res Commun. 2015 Aug 21;464(2):422-7.