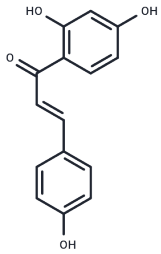
Data Sheet (Cat.No.T0725)

TargetMol

Isoliquiritigenin

Chemical Properties



CAS No. : 961-29-5

Formula: C15H12O4

Molecular Weight: 256.25

Storage: Keep away from moisture
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	Isoliquiritigenin (ISL) is a flavonoid natural product that inhibits influenza virus replication (EC50=24.7 μM) and aldose reductase activity (IC50=320 nM). Isoliquiritigenin has antitumor activity.
Targets(IC50)	Apoptosis,Reductase,Autophagy,Influenza Virus
In vitro	**METHODS**: Normal human hepatocyte cell line LO2 and HCC cell line Hep3B were treated with Isoliquiritigenin (30-60 μM) for 24-72 h. Cell viability was measured by MTT assay. **RESULTS**: Isoliquiritigenin showed significant cytotoxicity against Hep3B cells with an IC50 of 42.84±2.01 μM at 48 h. This effect was concentration and time dependent. However, at the same Isoliquiritigenin stimulation intensity, the survival of LO2 cells was significantly less affected with an IC50 >60 μM.[1] **METHODS**: Human colorectal cancer cells HCT-116 were treated with Isoliquiritigenin (20 μM) for 24 h. Apoptosis was detected by Flow cytometry. **RESULTS**: Treatment of HCT-116 cells with Isoliquiritigenin resulted in a significant increase in apoptosis (17.26%) in the treated group compared to the NC group (7.37%). [2]
In vivo	**METHODS**: To assay anti-tumor activity in vivo, Isoliquiritigenin (50 mg/kg) was injected intraperitoneally into BALB/c-nu/nu mice bearing Hep3B xenografts once daily for three weeks. **RESULTS**: Isoliquiritigenin-treated mice had reduced tumor burden in terms of mean tumor size or xenograft weight. [1]

Solubility Information

Solubility	Methanol: 100 mg/mL (390.24 mM),Sonication is recommended. DMSO: 62.3 mg/mL (243.12 mM),Sonication is recommended. Ethanol: 22 mg/mL (85.85 mM),Sonication is recommended. H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5.1 mg/mL (19.9 mM),Suspension. *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*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.9024 mL	19.5122 mL	39.0244 mL
5 mM	0.7805 mL	3.9024 mL	7.8049 mL
10 mM	0.3902 mL	1.9512 mL	3.9024 mL
50 mM	0.078 mL	0.3902 mL	0.7805 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

Huang Y, et al. Isoliquiritigenin inhibits the proliferation, migration and metastasis of Hep3B cells via suppressing cyclin D1 and PI3K/AKT pathway. Biosci Rep. 2020 Jan 31;40(1):BSR20192727.
Jung M A, Song H K, Jo K, et al.Gleditsia sinensis Lam. aqueous extract attenuates nasal inflammation in allergic rhinitis by inhibiting MUC5AC production through suppression of the STAT3/STAT6 pathway.Biomedicine & Pharmacotherapy.2023, 161: 114482.
The TCM Monomer Isoliquiritigenin Targeting METTL3, Shows Potential Anti-Leukemia Activity
Luo F, et al. Isoliquiritigenin Inhibits the Growth of Colorectal Cancer Cells through the ESR2/PI3K/AKT Signalling Pathway. Pharmaceuticals (Basel). 2023 Dec 27;17(1):43.
Kanazawa M, et al. Eur Urol, 2003, 43(5), 580-586.
Ma J, et al. Planta Med, 2001, 67(8), 754-757.
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