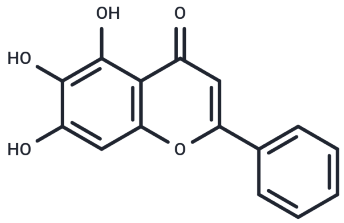
Data Sheet (Cat.No.T2858)

TargetMol
YOUR TARGET MOLECULES

Baicalein

Chemical Properties



CAS No. : 491-67-8

Formula: C15H10O5

Molecular Weight: 270.24

Appearance: no data available

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

Biological Description

Description	Baicalein (5,6,7-Trihydroxyflavone) is a xanthine oxidase inhibitor.
Targets(IC50)	Ferroptosis,Influenza Virus,ROS,Xanthine Oxidase
In vitro	Baicalein effectively inhibits T cell proliferation and cytokine secretion in response to mitogens in vitro. It has been observed that pre-treatment with baicalein markedly reduces both Con A or anti-CD3/CD28 mAb-induced cell proliferation and cytokine release at a concentration of 25 μM. Additionally, baicalein initiates NF-κB DNA binding while concurrently inhibiting nuclear thioredoxin activity. Furthermore, baicalein hampers the proliferation, migration, and invasion of MDA-MB-231 cells in both a time- and dose-dependent manner, significantly lowering SATB1 expression in these cells. It also diminishes the expression of Wnt1 and β-catenin proteins, along with the transcription of Wnt/β-catenin-regulated genes.
In vivo	Baicalein effectively reduces graft versus host disease induction without hindering T-cell homeostatic proliferation in mice, demonstrating its significant anti-inflammatory properties in vivo[2]. Further, in rats, baicalein administration guards against elevated heart to body weight ratios, increases in plasma brain natriuretic peptide levels, intraventricular septum thickness, and myocardial collagen volume in the left ventricle (all P<0.05, respectively). Its antifibrotic action is underscored by the reduced expression of pro-collagens I and III in the left ventricle, alongside diminished expression of 12-lipoxygenase, and lowered expression and activity of matrix metallopeptidase 9 and extracellular signal-regulated kinases, thus demonstrating baicalein's capability to inhibit cardiac fibrosis in hypertensive rats[4].
Cell Research	MTT assay is conducted to evaluate the effect of baicalein on proliferation of breast cancer cells. MDA-MB-231 cells are routinely digested, collected, and then seeded in 96-well plates at a density of 8×103 cells/well. After incubation for 12-24 hours, cells are treated with 0, 20, 40, 60, 80, 100, and 120 μM baicalein according to their experimental grouping and then incubated at 37°C for 24, 48, and 72 hours[3].

Solubility Information

Solubility	DMSO: 50 mg/mL (185.02 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7004 mL	18.5021 mL	37.0041 mL
5 mM	0.7401 mL	3.7004 mL	7.4008 mL
10 mM	0.370 mL	1.8502 mL	3.7004 mL
50 mM	0.074 mL	0.370 mL	0.7401 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

Zhang H, Cai J, Li C, et al.Wogonin inhibits latent HIV-1 reactivation by downregulating histone crotonylation. Phytomedicine.2023: 154855.