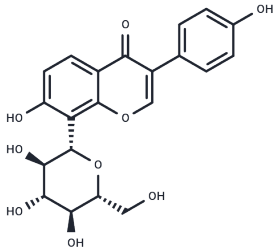
Data Sheet (Cat.No.T2815)

TargetMol

Puerarin

Chemical Properties



CAS No. : 3681-99-0

Formula: C21H20O9

Molecular Weight: 416.38

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	Puerarin (Kakonein), also known as Kakonein, is a member of the class of compounds known as isoflavonoid C-glycosides. It is a 5-HT2C receptor antagonist.
Targets(IC50)	5-HT Receptor
In vitro	Administering 300 mg/kg of Puerarin daily through oral ingestion to rats on a high-cholesterol diet significantly reduces the increase in total cholesterol levels in both serum and liver caused by the high-cholesterol diet.
In vivo	Puerarin, at a dose of 25 μM, induces dose-dependent growth inhibition in HT-29 cells. This effect is accompanied by an increase in bax and a decrease in c-myc and bcl-2.
Kinase Assay	STAT3-dependent dual-luciferase assay: HCT-116 cells are transiently transfected with reporter plasmid having the STAT3-binding element for regulating luciferase assay. Cells are treated with Cryptotanshinone for 24 hours at a concentration range of 0.2 to 50 μM. After treatment, cells are harvested in 20 μL of passive lysis buffer and luciferase activity is evaluated by the Dual Luciferase Reporter Assay kit on Wallac Victor2. The concentration of Cryptotanshinone that inhibits the luciferase activity by 50% represents IC50 value.
Cell Research	RAW264.7 cells are maintained at subconfluence in 95% air and 5% CO2 humidified atmosphere maintained at 37°C. The medium used for routine subculture is Dulbecco's Modified Eagle's Medium supplemented with 10% fetal bovine serum, penicillin (100 units/mL) and streptomycin (100 μg/ mL). An MTT assay is used to measure the viability of the cells after treatment with puerarin. After the supernatants are removed for nitrite determination, cells are incubated at 37°C with MTT (0.05 mg/mL) for 4 h, and the optical density is measured at 540 nm. The concentrations of puerarin are10, 20, 40 and 100 μM[1].

Solubility Information

Solubility	DMSO: 250 mg/mL (600.41 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), 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 mg/mL (12.01 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	2.4017 mL	12.0083 mL	24.0165 mL
5 mM	0.4803 mL	2.4017 mL	4.8033 mL
10 mM	0.2402 mL	1.2008 mL	2.4017 mL
50 mM	0.048 mL	0.2402 mL	0.4803 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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Yan LP, et al. Life Sci, 2006, 79(4), 324-330.
Yu Z, et al. Cancer Lett, 2006, 238(1), 53-60.
Wang K, Sun Y, Zhu K, et al.Anti-Pyroptosis Biomimetic Nanoplatform loading Puerarin for Myocardial Infarction Repair: From Drug Discovery to Drug Delivery.Biomaterials.2024: 122890.
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