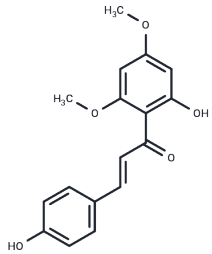
Data Sheet (Cat.No.T5753)

TargetMol

Flavokawain C

Chemical Properties



CAS No. : 37308-75-1

Formula: C17H16O5

Molecular Weight: 300.31

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	Flavokawain C (FKC), a naturally occurring chalcone, which can be isolated from Kava. FKC has the potential to be developed into chemotherapeutic drug for the treatment of colon adenocarcinoma.
Targets(IC50)	Apoptosis
In vitro	Flavokawain C (FKC) markedly decreased the cell viability of HT-29 cells and the cells showed dramatic changes in cellular and nuclear morphologies with typical apoptotic features.?The induction of apoptosis correlated well with the externalization of phosphatidylserine, DNA fragmentation, decreased mitochondrial membrane potential, activation of caspases, and PARP cleavage.?This was associated with an increase in reactive oxygen species and a decrease in SOD activity.?The protein levels of XIAP, c-IAP1, and c-IAP2 were downregulated, whereas the GADD153 was upregulated after FKC treatment.?FKC induced cell cycle arrest at the G1 and G2/M phases via upregulation of p21 and p27 in a p53-independent manner.??FKC has the potential to be developed into chemotherapeutic drug for the treatment of colon adenocarcinoma[1].
Cell Research	Cell viability of HT-29 cells was assessed by Sulforhodamine B assay after FKC treatment.?Induction of apoptosis was examined by established morphological and biochemical assays.?ROS generation was determined by dichlorofluorescein fluorescence staining, and superoxide dismutase activity was measured using the spectrophotometric method.?Western blotting was used to examine the changes in the protein levels[1].

Solubility Information

Solubility	DMSO: 150 mg/mL (499.48 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (3.33 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	3.3299 mL	16.6495 mL	33.2989 mL
5 mM	0.666 mL	3.3299 mL	6.6598 mL
10 mM	0.333 mL	1.6649 mL	3.3299 mL
50 mM	0.0666 mL	0.333 mL	0.666 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

Phang C W , Karsani S A , Abd Malek S N . Induction of Apoptosis and Cell Cycle Arrest by Flavokawain C on HT-29 Human Colon Adenocarcinoma via Enhancement of Reactive Oxygen Species Generation, Upregulation of p21, p27, and GADD153, and Inactivation of Inhibitor of Apoptosis Proteins.[J]. Pharmacognosy Magazine, 2017, 13 (Suppl 2):S321-S328.

Chung-Weng P , Anuar K S , Gautam S , et al. Flavokawain C Inhibits Cell Cycle and Promotes Apoptosis, Associated with Endoplasmic Reticulum Stress and Regulation of MAPKs and Akt Signaling Pathways in HCT 116 Human Colon Carcinoma Cells[J]. PLOS ONE, 2016, 11(2):e0148775-.

Proteomic analysis of flavokawain C-induced cell death in HCT 116 colon carcinoma cell line.