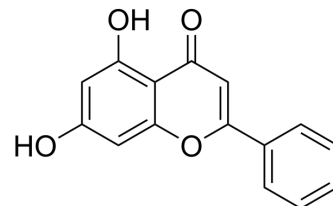


Chrysin

Cat. No.:	HY-14589		
CAS No.:	480-40-0		
Molecular Formula:	C ₁₅ H ₁₀ O ₄		
Molecular Weight:	254.24		
Target:	Estrogen Receptor/ERR		
Pathway:	Vitamin D Related/Nuclear Receptor		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (393.33 mM)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	3.9333 mL	19.6665 mL	39.3329 mL
	5 mM	0.7867 mL	3.9333 mL	7.8666 mL
	10 mM	0.3933 mL	1.9666 mL	3.9333 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
 Solubility: ≥ 2.5 mg/mL (9.83 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
 Solubility: ≥ 2.5 mg/mL (9.83 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Chrysin is one of the most well known estrogen blockers.

IC₅₀ & Target

estrogen

In Vitro

Chrysin is mainly found in passion flowers, honey, and propolis acts as a potential therapeutic and preventive agent to inhibit proliferation and invasion of various human cancer cells. Although Chrysin has anti-carcinogenic effects in several cancers, little is known about its functional roles in ovarian cancer which shows poor prognosis and chemoresistance to traditional therapeutic agents. Chrysin inhibits ovarian cancer cell proliferation and induced cell death by increasing reactive oxygen species (ROS) production and cytoplasmic Ca²⁺ levels as well as inducing loss of mitochondrial membrane

potential (MMP). Chrysin activates MAPK and PI3K/AKT pathways in ES2 and OV90 cells in concentration-response experiments. Chrysin suppresses tumor growth by regulating canonical Wnt and nuclear factor NF- κ B signaling cascades in cancer cells. Chrysin stimulates the phosphorylation of AKT and P70S6K proteins in both ES2 and OV90 cells compared to the untreated control cells. In addition, Chrysin activates the phospho-ERK1/2, p38, and JNK proteins as members of the MAPK pathway in the ovarian cancer cells^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay^[1]

The proliferation assays are conducted using a cell proliferation enzyme-linked immunosorbent assay (ELISA) 5-bromo-2'-deoxyuridine (BrdU) kit. Briefly, ES2 and OV90 cells are seeded in a 96-well plate, and then treated with Chrysin (0, 5, 10, 20, 50, and 100 μ M) with or without inhibitors (20 μ M LY294002, PI3K/AKT; 10 μ M U0126, ERK1/2; 10 μ M SP600125, JNK; and 20 μ M SB203580, p38) in a final volume of 100 μ L/well. After a 48-h incubation, 10 μ M BrdU is added to the cell culture, followed by an additional 2-h incubation at 37°C. After labeling the cells with BrdU, they are fixed and then incubated with the anti-BrdU-peroxidase (POD) working solution for 90 min. The anti-BrdU-POD binds to the BrdU incorporated into newly synthesized cellular DNA and these immune complexes are detected by analyzing their reaction with the 3,3',5,5'-tetramethylbenzidine (TMB) substrate. The absorbance values of the reaction product are measured at 370 and 492 nm using an ELISA reader^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Acta Pharm Sin B. 2021 Jan;11(1):143-155.
- Clin Sci. 2021 Jul 20;CS20210571.
- Int J Mol Med. July 13, 2021.
- Cell Cycle. 2022 Jan 5;1-13.
- Regen Ther. 13 January 2022.

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REFERENCES

[1]. Lim W, et al. Chrysin Attenuates Progression of Ovarian Cancer Cells by Regulating Signaling Cascades and Mitochondrial Dysfunction. J Cell Physiol. 2017 Aug 17.

Caution: Product has not been fully validated for medical applications. For research use only.

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