Tectorigenin

Cat. No.: HY-N0792

CAS No.: 548-77-6

Molecular Formula: $C_{16}H_{12}O_6$

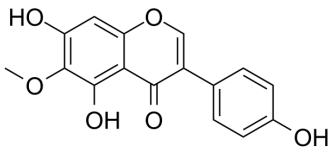
Molecular Weight: 300.26

Target: Others

Pathway: Others

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 : 120 mg/mL (399.65 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	3.3304 mL	16.6522 mL	33.3045 mL
	5 mM	0.6661 mL	3.3304 mL	6.6609 mL
	10 mM	0.3330 mL	1.6652 mL	3.3304 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (6.93 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (6.93 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (6.93 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Tectorigenin is a plant isoflavonoid originally isolated from the dried flower of Pueraria lobate Benth.

In Vitro

Tectorigenin is a plant isoflavonoid originally isolated from the dried flower of Pueraria thomsonii Benth. Palmitic acid (PA)-stimulated ROS production is abolished by treatment with Tectorigenin for HUVECs in a dose-dependent manner (0.1, 1, 10 μM). Treatment with Tectorigenin attenuates enhanced IKKβ phosphorylation and effectively blocks NF-κB activation by inhibition of p65 phosphorylation at concentrations ranging from 0.1 to 10 μM. Tectorigenin treatment also effectively inhibits PA-augmented TNF-α and IL-6 production in a concentration dependent manner[1]. The number of viable HepG2 cells treated by Tectorigenin decreases in a concentration- and time-dependent manner. When HepG2 cells are treated with

	Tectorigenin at 5, 10 and 20 mg/L for 24 h, the viability rate is 91%, 79% and 62%, respectively[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [1]	HUVECs grown to confluence in 24-well plates are pretreated with Tectorigenin (0.1, 1, 10 μM), salicylate (5 mM) or GSH (1 mM) for 30 min, then stimulated with Palmitic acid (PA) (100 μM) for further 12 h in serum-free medium, and the medium is then collected on ice. The levels of TNF-α and IL-6 in the supernatant are assayed with commercial ELISA Kits[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Cell Assay [2]	Cell viability is assessed by MTT method. Briefly, cells are seeded in 96-well plate at a density of 1×10^4 cells/well. After 24 h incubation, Tectorigenin at different concentrations is added to the cells while only DMSO (solvent) is added as a negative control. After growing for 12, 24 and 48 h, cells are incubated with MTT (0.5 mg/mL) for 4 h at 37°C. During this incubation period, water-insoluble formazan crystals are formed, which are dissolved by the addition of 100 μL/well DMSO. The optical densities at 570 nm are measured using an enzyme-linked immunosorbent assay plate reader. Wells containing culture medium and MTT but no cells act as blanks[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Br J Pharmacol. 2021 Jun;178(12):2443-2460.

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REFERENCES

[1]. Wang Q, et al. Tectorigenin Attenuates Palmitate-Induced Endothelial Insulin Resistance via Targeting ROS-Associated Inflammation and IRS-1 Pathway. PLoS One. 2013 Jun 19;8(6):e66417.

[2]. Jiang CP, et al. Pro-apoptotic effects of tectorigenin on human hepatocellular carcinoma HepG2 cells. World J Gastroenterol. 2012 Apr 21;18(15):1753-64.

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