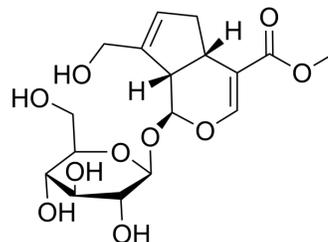


Geniposide

Cat. No.:	HY-N0009		
CAS No.:	24512-63-8		
Molecular Formula:	C ₁₇ H ₂₄ O ₁₀		
Molecular Weight:	388.37		
Target:	Amyloid-β; Influenza Virus		
Pathway:	Neuronal Signaling; Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	1 year
		-20°C	6 months



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (257.49 mM; Need ultrasonic)
 H₂O : 50 mg/mL (128.74 mM; Need ultrasonic)

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.5749 mL	12.8743 mL	25.7486 mL
	5 mM	0.5150 mL	2.5749 mL	5.1497 mL
	10 mM	0.2575 mL	1.2874 mL	2.5749 mL

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

In Vivo

- Add each solvent one by one: PBS
Solubility: 100 mg/mL (257.49 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.75 mg/mL (7.08 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.75 mg/mL (7.08 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.75 mg/mL (7.08 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Geniposide is an iridoid glucoside extracted from Gardenia jasminoides Ellis fruits; exhibits a variety of biological activities such as anti-diabetic, antioxidative, antiproliferative and neuroprotective activities.

In Vitro

Geniposide exhibits a variety of activities, such as on antithrombosis, anti-inflammation, anti-diabetes, anti-atherosclerosis,

antidepressant, healing Alzheimer's disease (AD), anti-hypertension, toxicology, and untoward reaction are summarized^[1]. Geniposide markedly declines the production of IL-8, IL-1 β and MCP-1 in OGD-induced brain microvascular endothelial cells, the expression of P2Y₁₄ receptor is significantly down-regulated, the phosphorylation of RAF-1, MEK1/2, ERK1/2 are suppressed^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Geniposide (200 and 400 mg/kg) significantly decreases the blood glucose, insulin and TG levels in diabetic mice in a dose-dependent manner. This compound also decreases the expression of GP and G6Pase at mRNA and immunoreactive protein levels, as well as enzyme activity^[3]. Geniposide (20.0, 40.0, or 80 mg/kg) significantly reverses the excessive, alcohol-induced elevation in both serum ALT/AST and hepatic LPO levels. Geniposide upregulates the expression of heme oxygenase-1 (HO-1) to attenuate the cell apoptosis induced by 3-morpholinosydnonimine hydrochloride (SIN-1) in primary cultured hippocampal neurons^[4]. Geniposide inhibits photochemistry-induced thromboembolism model in vivo. Geniposide are very effective depressants on NF- κ B by interrupting I κ B degradation^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay ^[2]

The third passages of brain microvascular endothelial cells (BMECs) are used for the experiment. The BMECs are divided into four groups: (1) normal control group: the normal cultured BMECs without treatment; (2) OGD group: the BMECs injured by OGD according to the above method; (3) geniposide group: the OGD-injured BMECs treated with 33.2 μ g/mL geniposide for 6 h; (4) PTX group: the OGD-injured BMECs administrated with 100 ng/mL PTX. PTX, known as an inhibitor of G_i-coupled receptor is used to assess the activation of P2Y₁₄ receptor induced by OGD in this experiment^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Administration ^[3]

Mice: Type 2 diabetic mice, induced by a high-fat diet and streptozotocin injection, are treated with or without geniposide for 2 weeks. Blood glucose levels are monitored by a glucometer. Insulin concentrations are analyzed by the ELISA method. Total cholesterol (TC) and triglyceride (TG) levels are measured using Labassay kits. Activities of hepatic GP and G6Pase are measured by glucose-6-phosphate dehydrogenase-coupled reaction. Real-time RT-PCR and Western blotting are used to determine the mRNA and protein levels of both enzymes^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Biomed Pharmacother. November 2022, 113829.
- Phytother Res. 2022 Dec 14.
- Gene. 2023 Jun 11;147564.
- Exp Ther Med. August 31, 2021.
- J Orthop Surg Res. 2024 Mar 11;19(1):179.

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REFERENCES

[1]. Liu H, et al. Fructus Gardenia (Gardenia jasminoides J. Ellis) phytochemistry, pharmacology of cardiovascular, and safety with the perspective of new drugs development. J Asian Nat Prod Res. 2013;15(1):94-110.

[2]. Li F, et al. Geniposide attenuates inflammatory response by suppressing P2Y₁₄ receptor and downstream ERK1/2 signaling pathway in oxygen and glucose deprivation-induced brain microvascular endothelial cells. J Ethnopharmacol. 2016 Jun 5;185:77-86.

[3]. Wu SY, et al. Effect of geniposide, a hypoglycemic glucoside, on hepatic regulating enzymes in diabetic mice induced by a high-fat diet and streptozotocin. Acta Pharmacol Sin. 2009 Feb;30(2):202-8.

[4]. Wang J, et al. Geniposide protects against acute alcohol-induced liver injury in mice via up-regulating the expression of the main antioxidant enzymes. Can J Physiol Pharmacol. 2015 Apr;93(4):261-7.

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

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