Engeletin

Cat. No.: HY-N0436

CAS No.: 572-31-6

Molecular Formula: $C_{21}H_{22}O_{10}$

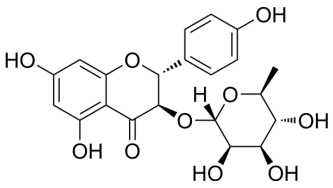
Molecular Weight: 434.39

Target: NF-κB

Pathway: NF-κB

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (230.21 mM)

H_2O : < 0.1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	2.3021 mL	11.5104 mL	23.0208 mL
	5 mM	0.4604 mL	2.3021 mL	4.6042 mL
	10 mM	0.2302 mL	1.1510 mL	2.3021 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 (4.79 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (4.79 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (4.79 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Engeletin is a flavanonol glycoside isolated from Smilax glabra Roxb. , inhibits NF-κB signaling-pathway activation, and possesses anti-inflammatory, analgesic, diuresis, detumescence, and antibiosis effects.

IC_{50} & Target

NF-κB

In Vitro	Engeletin is a flavanonol glycoside isolated from hymenaea martiana, inhibits NF-κB signaling-pathway activation[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Engeletin (25, 50, 100 mg/kg, i.p.) markedly reduces LPS-increased myeloperoxidase activity in mice, activates NF-κB-pathway activation, decreases the production of inflammatory mediators (iNOS and COX-2), and suppresses the expression of TLR4-signaling downstream molecules such as MyD88, IRAK1, TRAF6, and TAK1 proteins[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Animal Administration [1]	Mice[1] The mice are classified at random into the following six groups of 10 mice each to cause the endometritis model: blank group, LPS group, Engeletin (25, 50, and 100 mg/kg) + LPS groups, and Engeletin (100 mg/kg) group. Engeletin is solubilized by heated normal saline to give the final concentrations of 25, 50, and 100 mg/kg. Briefly, each uterus is infused with 50 μL of LPS (1 mg/mL) to induce endometritis. At 24 h after the instillation, Engeletin groups receive an intraperitoneal injection of diverse Engeletin concentrations (25, 50, and 100 mg/kg) three times (once every 6 h). The Engeletin group is given an intraperitoneal injection of Engeletin (100 mg/kg). The blank group receive the normal saline. Afterward, the mice are killed by CO_2 inhalation. Uterus tissues are harvested and kept in −80°C[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.
- Cell Death Discov. 2022 Dec 16;8(1):493.
- J Inflamm Res. 2021 Mar 9;14:745-760.

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REFERENCES

[1]. Wu H, et al. Engeletin Alleviates Lipopolysaccharide-Induced Endometritis in Mice by Inhibiting TLR4-mediated NF-κB Activation. J Agric Food Chem. 2016 Aug 10;64(31):6171-8.

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