Farrerol

Cat. No.: HY-N0344

CAS No.: 24211-30-1

Molecular Formula: $C_{17}H_{16}O_5$

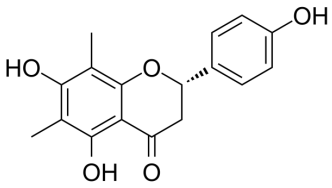
Molecular Weight: 300.31

Target: Others

Pathway: Others

Storage: 4°C, protect from light

* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 125 mg/mL (416.24 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.3299 mL	16.6495 mL	33.2989 mL
5 mM	0.6660 mL	3.3299 mL	6.6598 mL
10 mM	0.3330 mL	1.6649 mL	3.3299 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

Farrerol is a bioactive constituent of Rhododendron, with broad activities such as anti-oxidative, anti-inflammatory, anti-tumor, neuroprotective and hepatoprotective effects[1][2][3][4][5][6].

In Vitro

Farrerol observably reduces the production of inflammatory mediators including IL-1β, IL-6, TNF-α, COX-2, and iNOS in LPS-induced RAW264.7 cells via suppressing AKT, ERK1/2, JNK1/2, and NF-κB p65 phosphorylation[1].

Farrerol attenuates β-amyloid-induced oxidative stress and inflammation through Nrf2/Keap1 pathway in a microglia cell line[2].

Farrerol inhibits angiogenesis through Akt/mTOR, Erk and Jak2/Stat3 signal pathway[3].

	Farrerol overcomes the invasiveness of lung squamous cell carcinoma cells by regulating the expression of inducers of epithelial mesenchymal transition[4]. Farrerol ameliorates acetaminophen-induced hepatotoxicity via activation of Nrf2 and autophagy[6]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Farrerol protects dopaminergic neurons in a rat model of lipopolysaccharide-induced Parkinson's disease by suppressing the activation of the AKT and NF-κB signaling pathways[5]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Antioxidants. 2021, 10(6), 863.

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REFERENCES

[1]. Ran X, et al. Farrerol Ameliorates TNBS-Induced Colonic Inflammation by Inhibiting ERK1/2, JNK1/2, and NF-κB Signaling Pathway. Int J Mol Sci. 2018 Jul 13;19(7).

[2]. Cui B, et al. Farrerol attenuates β-amyloid-induced oxidative stress and inflammation through Nrf2/Keap1 pathway in a microglia cell line. Biomed Pharmacother. 2019 Jan;109:112-119.

[3]. Dai F, et al. Farrerol inhibited angiogenesis through Akt/mTOR, Erk and Jak2/Stat3 signal pathway. Phytomedicine. 2016 Jun 15;23(7):686-93.

[4]. Li B, et al. Farrerol overcomes the invasiveness of lung squamous cell carcinoma cells by regulating the expression of inducers of epithelial mesenchymal transition. Microb Pathog. 2019 Jun;131:277.

[5]. Li Y, et al. Farrerol protects dopaminergic neurons in a rat model of lipopolysaccharide-induced Parkinson's disease by suppressing the activation of the AKT and NF-κB signaling pathways. Int Immunopharmacol. 2019 Oct;75:105739.

[6]. Wang L, et al. Farrerol Ameliorates APAP-induced Hepatotoxicity via Activation of Nrf2 and Autophagy. Int J Biol Sci. 2019 Jan 29;15(4):788-799.

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