Scutellarein

Cat. No.: HY-N0752

CAS No.: 529-53-3

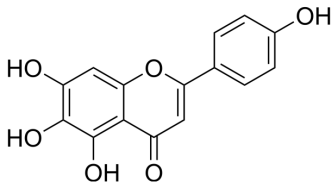
Molecular Formula: $C_{15}H_{10}O_6$

Molecular Weight: 286.24

Target: Src; Autophagy; SARS-CoV

Pathway: Protein Tyrosine Kinase/RTK; Autophagy; Anti-infection

Storage: 4°C, protect from light
* In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 30 mg/mL (104.81 mM)
* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.4936 mL	17.4679 mL	34.9357 mL
5 mM	0.6987 mL	3.4936 mL	6.9871 mL
10 mM	0.3494 mL	1.7468 mL	3.4936 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 (7.27 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (7.27 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Scutellarein is a natural flavonoid compound with anti-inflammatory effects.

In Vitro

Scutellarein (0-200 μM, 24 h) inhibits NO production, reduces the mRNA expression levels of iNOS and TNF-α in LPS-activated RAW264.7 cells[1].
Scutellarein (0-50 μM, 24 h) inhibits proliferation, migration, colony formation and induces the apoptosis of HT1080 cells[3].
Scutellarein (0-50 μM, 24 h) inhibits MMP-2, -9 and -14 expression and NF-κB activation in HT1080 cells[3].
Scutellarein shows DPPH, ABTS+·, ·OH radical-scavenging activity (IC_{50}: 16.84 μM, 3.00 μM, 0.31 mM respectively)[4].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Scutellarein (50 mg/kg, in diet, 16 weeks) shows anti-obesity effects, and shows lipid lowering and liver protective effects in

HFD mice[2].
Scutellarein (50 and 500 mg/kg) inhibits tumor growth in a mouse HT108 xenograft model[3].
Scutellarein (0-1.40 mmol/kg, p.o.) improves neuronal injury, and protects rats from cerebral ischemia[5].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	HFD mice[2]
Dosage:	50 mg/kg
Administration:	in diet, 16 weeks
Result:	Reduced lipid accumulation and levels of inflammatory factors in the liver. Reduced the Body Weight.

CUSTOMER VALIDATION

- Nucleic Acids Res. 2021 Jan 8;49(D1):D1113-D1121.
- Acta Pharm Sin B. 2021 Jan;11(1):143-155.
- Cell Chem Biol. 2022 Jun 9;S2451-9456(22)00201-X.
- Pharmaceuticals. 2022, 15(2), 179.
- J Immunol. 2022 Feb 1;208(3):753-761.

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REFERENCES

[1]. Sung NY, et al. Scutellarein Reduces Inflammatory Responses by Inhibiting Src Kinase Activity. Korean J Physiol Pharmacol. 2015 Sep;19(5):441-9.

[2]. Lin Y, et al. Novel anti-obesity effect of scutellarein and potential underlying mechanism of actions. Biomed Pharmacother. 2019 Sep;117:109042.

[3]. Shi X, et al. Scutellarein inhibits cancer cell metastasis in vitro and attenuates the development of fibrosarcoma in vivo. Int J Mol Med. 2015 Jan;35(1):31-8.

[4]. Qian LH, et al. Synthesis and bio-activity evaluation of scutellarein as a potent agent for the therapy of ischemic cerebrovascular disease. Int J Mol Sci. 2011;12(11):8208-16.

[5]. Tang H, et al. Neuroprotective effects of scutellarin and scutellarein on repeatedly cerebral ischemia-reperfusion in rats. Pharmacol Biochem Behav. 2014 Mar;118:51-9.

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