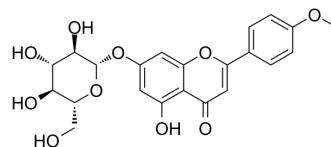


Tilianin

Cat. No.:	HY-N2555
CAS No.:	4291-60-5
Molecular Formula:	C ₂₂ H ₂₂ O ₁₀
Molecular Weight:	446.4
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 : 50 mg/mL (112.01 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.2401 mL	11.2007 mL	22.4014 mL
		5 mM	0.4480 mL	2.2401 mL	4.4803 mL
		10 mM	0.2240 mL	1.1201 mL	2.2401 mL
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.08 mg/mL (4.66 mM); Clear solution 2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.08 mg/mL (4.66 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Tilianin is an active flavonoid glycoside found in many medical plants, with potential anti-hypertensive, myocardial-protective, anti-diabetic, anti-hyperlipidemic, anti-inflammatory and antioxidant effects ^{[1][2][3]} .
In Vitro	Tilianin (10 μM, 20 μM) reduced secretion of LPS (1 μg/mL)-induced proinflammatory cytokine in RAW264.7 macrophage cell [2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Tilianin (10 mg/kg; i.p.) is a potential agent for ameliorating LPS-induced acute lung injury (ALI) ^[2] . Tilianin shows T _{max} =10.8 min, C _{max} =176.9 nmol/L, AUC _{0-∞} = 17.4 min*μmol/L in mice ^[3] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	C57BL/6 mouse ^[2]
Dosage:	10 mg/kg
Administration:	Intraperitoneal injection
Result:	Attenuated infiltration of macrophages and histopathological changes and improved inflammation.

Animal Model:	Male FVB mice (6-10 weeks) ^[3]
Dosage:	10 mg/kg (Pharmacokinetic Analysis)
Administration:	Oral gavage
Result:	T _{max} (10.8 min), C _{max} (176.9 nmol/L), AUC _{0-∞} (17.4 min*μmol/L).

CUSTOMER VALIDATION

- Drug Dev Res. 2023 Apr 13.

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REFERENCES

- [1]. Sergienko TO, et al. Moldavoside--new flavonoid glycoside of Dragocephalum moldavicum L. Farm Zh. 1968;23(2):75-8.
- [2]. Yonghong Zhang , et al. Role of Tiliainin against Acute Lung Injury in In Vitro LPS-Induced Alveolar Macrophage Cells and an In Vivo C57BL/6 Mice Model. J Environ Pathol Toxicol Oncol. 2020;39(4):335-344.
- [3]. Liping Wang, et al. Simultaneous determination of tiliainin and its metabolites in mice using ultra-high-performance liquid chromatography with tandem mass spectrometry and its application to a pharmacokinetic study. Biomed Chromatogr. 2018 Apr;32(4).

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

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