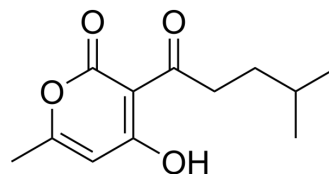


Pogostone

Cat. No.:	HY-N1416
CAS No.:	23800-56-8
Molecular Formula:	C ₁₂ H ₁₆ O ₄
Molecular Weight:	224.25
Target:	Bacterial; Apoptosis; Autophagy
Pathway:	Anti-infection; Apoptosis; Autophagy
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (445.93 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	4.4593 mL	22.2965 mL	44.5931 mL
		5 mM	0.8919 mL	4.4593 mL	8.9186 mL
	10 mM	0.4459 mL	2.2297 mL	4.4593 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: 2.5 mg/mL (11.15 mM); Suspended solution; Need ultrasonic				
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (11.15 mM); Suspended solution; Need ultrasonic				
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (11.15 mM); Clear solution				

BIOLOGICAL ACTIVITY

Description	Pogostone is isolated from patchouli oil with anti-bacterial and anti-cancer activities. Pogostone inhibits both gram negative and gram positive bacteria, also show inhibitory effect on corynebacterium xerosis with a MIC value of 0.098 µg/ml [2]. Pogostone induces cell apoptosis and autophagy[2].
IC ₅₀ & Target	IC ₅₀ : apoptosis; autophagy; bacteria ^{[1][2]}
In Vitro	Pogostone shows inhibitory effects on HCT116 cell with an IC ₅₀ value of 18.7±1.93 µg/ml, and show strikingly lower cytotoxicity on normal human embryonic kidney cell 293A (IC ₅₀ : 95.13±19.44 µg/ml) and endothelial cell HUVEC (IC ₅₀ : 112±20.77 µg/ml) ^[1] .

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Pogostone (intraperitoneal injection; 25, 50 and 100 mg/kg) shows antibacterial activity in vivo against Escherichia coli (E. coli) and MRSA. Ninety percent of the mice infected with E. coli could be protected at the concentrations of 50 and 100 mg/kg, and 60% of the mice at 25 mg/kg, while the rate of protection for the mice infected with MRSA was 60% and 50% at doses of 100 and 50 mg/kg, respectively^[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- PLoS Biol. 2024 June 27.
- bioRxiv. 2023 Jun 3.

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REFERENCES

[1]. Peng F, et al. In vitro and in vivo antibacterial activity of Pogostone. Chin Med J (Engl). 2014;127(23):4001-5.

[2]. Cao ZX, et al. Pogostone induces autophagy and apoptosis involving PI3K/Akt/mTOR axis in human colorectal carcinoma HCT116 cells. J Ethnopharmacol. 2017 Apr 18;202:20-27.

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

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