Coumarin

Cat. No.: HY-N0709

CAS No.: 91-64-5

Molecular Formula: $C_9H_6O_2$

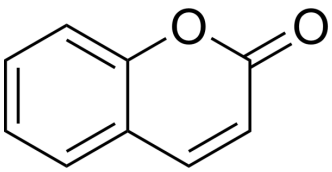
Molecular Weight: 146.14

Target: Bacterial; Fungal

Pathway: Anti-infection

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (684.28 mM)

H_2O : 4 mg/mL (27.37 mM; Need ultrasonic)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	6.8428 mL	34.2138 mL	68.4275 mL
5 mM	1.3686 mL	6.8428 mL	13.6855 mL
10 mM	0.6843 mL	3.4214 mL	6.8428 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: PBS
   Solubility: 8.33 mg/mL (57.00 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 3 mg/mL (20.53 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 3 mg/mL (20.53 mM); Clear solution
4. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3 mg/mL (20.53 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Coumarin is a potent and orally active anti-inflammatory agent. Coumarin shows an antinociceptive effect. Coumarin shows antibacterial, antifungal and anticancer activity[1][2].

In Vivo	Coumarin (1-10 mg/kg; p.o.) shows an antinociceptive effect in a dose-dependent manner in the acetic acid-induced writhing test[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	20-25 g, Male ICR mice[1]
Dosage:	1-10 mg/kg
Administration:	P.o.; 30 min prior to performing the acetic acid
Result:	Showed an antinociceptive effect in a dose-dependent manner as measured in the acetic acid-induced writhing test.

REFERENCES

[1]. Park SH, et al. Antinociceptive profiles and mechanisms of orally administered coumarin in mice. Biol Pharm Bull. 2013;36(6):925-30.

[2]. enugopala KN, et al. Review on natural coumarin lead compounds for their pharmacological activity. Biomed Res Int. 2013;2013:963248.

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