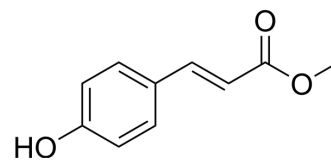


Methyl p-coumarate

Cat. No.:	HY-N1434		
CAS No.:	3943-97-3		
Molecular Formula:	C ₁₀ H ₁₀ O ₃		
Molecular Weight:	178.18		
Target:	Fungal		
Pathway:	Anti-infection		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro	DMSO : 100 mg/mL (561.23 mM; ultrasonic and warming and heat to 60°C)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	5.6123 mL	28.0615 mL	56.1230 mL
		5 mM	1.1225 mL	5.6123 mL	11.2246 mL
10 mM		0.5612 mL	2.8062 mL	5.6123 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.5 mg/mL (14.03 mM); Suspended solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (14.03 mM); Clear solution Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (14.03 mM); Clear solution 				

BIOLOGICAL ACTIVITY

Description	Methyl p-coumarate (Methyl 4-hydroxycinnamate), an orally active esterified derivative of p-Coumaric acid (pCA), can be isolated from the flower of <i>Trixis michuacana</i> var <i>longifolia</i> . Methyl p-coumarate could inhibit the melanin formation in B16 mouse melanoma cells. Methyl p-coumarate also has strong in vitro inhibitory effect on <i>A. alternata</i> and other pathogens ^[1] [2].
In Vitro	Methyl p-coumarate (10 μM) inhibits melanin formation in B16 mouse melanoma cells ^[1] . Methyl p-coumarate (200 μg/mL) shows antifungal activity against <i>A. alternata</i> , and inhibits <i>Alternaria rot</i> in jujube fruit ^[2] .

Methyl p-coumarate (0-100 μ M, 1 h) shows anti-inflammatory activity on Phorbol 12-myristate 13-acetate (HY-18739) (10 nM, 18 h)-stimulated A549 cells by suppressing the secretion of IL-6, IL-8, MCP-1, and ICAM-1^[3].
Methyl p-coumarate (0-100 μ M, 1 h) inhibits activation of NF- κ B/AP-1 in Phorbol 12-myristate 13-acetate (HY-18739) (10 nM, 18 h)-stimulated A549 cells^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Western Blot Analysis^[3]

Cell Line:	Phorbol 12-myristate 13-acetate (HY-18739) (10 nM, 1 h)-stimulated A549 cells
Concentration:	0-100 μ M
Incubation Time:	1 h
Result:	Inhibited PMA-stimulated phosphorylation of I κ B α and p65, as well as c-Jun/c-Fos phosphorylation and c-Jun/c-Fos nuclear translocation.

In Vivo

Methyl p-coumarate (5 mg/kg, p.o.) inhibits airway inflammation in Ovalbumins (HY-W250978)-induced mice with allergic asthma^[3].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Ovalbumins (HY-W250978)-induced mice with allergic asthma ^[3]
Dosage:	5 mg/kg
Administration:	p.o.
Result:	Inhibited the secretion of Th2 cytokines, MCP-1, and IgE. Inhibited eosinophil/macrophage influx. Inhibited immune cell influx and mucus secretion.

REFERENCES

- [1]. Park JW, et al. Methyl P-Coumarate Ameliorates the Inflammatory Response in Activated-Airway Epithelial Cells and Mice with Allergic Asthma. *Int J Mol Sci.* 2022 Nov 28;23(23):14909.
- [2]. Kubo I, et, al. Methyl p-coumarate, a melanin formation inhibitor in B16 mouse melanoma cells. *Bioorg Med Chem.* 2004 Oct 15;12(20):5349-54.
- [3]. Yuan S, et, al. Defense Responses, Induced by p-Coumaric Acid and Methyl p-Coumarate, of Jujube (*Ziziphus jujuba* Mill.) Fruit against Black Spot Rot Caused by *Alternaria alternate*. *J Agric Food Chem.* 2019 Mar 13;67(10):2801-2810.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA