

Methyl cinnamate

Chemical Properties

CAS No. :	103-26-4
Formula:	C10H10O2
Molecular Weight:	162.19
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	Methyl cinnamate, a tyrosinase inhibitor and a flavoring compound, has antimicrobial, antiadipogenic, vasorelaxant, and anti-inflammatory effects.
Targets(IC50)	Antibacterial,AMPK,Tyrosinase
In vitro	At 1-3000 $\mu\text{mol/L}$, the E-isomer of methyl cinnamate (E-MC) concentration-dependently relaxed endothelium-intact aortic preparations that had been precontracted with phenylephrine (PHE; 1 $\mu\text{mol/L}$), with an IC50 value (geometric mean) of 877.6 $\mu\text{mol/L}$ (95% confidence interval (CI) 784.1-982.2 $\mu\text{mol/L}$). Over the concentration range 1-3000 $\mu\text{mol/L}$, E-MC relaxed K(+)-induced contractions in mesenteric artery preparations (IC50 314.5 $\mu\text{mol/L}$; 95% CI 141.9-697.0 $\mu\text{mol/L}$) with greater potency than in aortic preparations (IC50 1144.7 $\mu\text{mol/L}$; 95% CI 823.2-1591.9 $\mu\text{mol/L}$).

Solubility Information

Solubility	H2O: Insoluble, DMSO: 50 mg/mL (308.28 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (12.33 mM),Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	6.1656 mL	30.828 mL	61.6561 mL
5 mM	1.2331 mL	6.1656 mL	12.3312 mL
10 mM	0.6166 mL	3.0828 mL	6.1656 mL
50 mM	0.1233 mL	0.6166 mL	1.2331 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Vasconcelos-Silva AA, et al. Vasorelaxation induced by methyl cinnamate, the major constituent of the essential oil of *Ocimum micranthum*, in rat isolated aorta. *Clin Exp Pharmacol Physiol*. 2014 Oct;41(10):755-62.

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