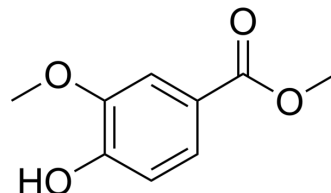


Methyl vanillate

Cat. No.:	HY-75342
CAS No.:	3943-74-6
Molecular Formula:	C ₉ H ₁₀ O ₄
Molecular Weight:	182.17
Target:	Wnt; Reactive Oxygen Species; Endogenous Metabolite
Pathway:	Stem Cell/Wnt; Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB
Storage:	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (548.94 mM)
 H₂O : 1.67 mg/mL (9.17 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	5.4894 mL	27.4469 mL	54.8938 mL
	5 mM	1.0979 mL	5.4894 mL	10.9788 mL
	10 mM	0.5489 mL	2.7447 mL	5.4894 mL

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

In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.5 mg/mL (13.72 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.5 mg/mL (13.72 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.5 mg/mL (13.72 mM); Clear solution
- Add each solvent one by one: PBS
Solubility: 2 mg/mL (10.98 mM); Clear solution; Need ultrasonic and warming and heat to 60°C

BIOLOGICAL ACTIVITY

Description

Methyl vanillate, one of the ingredients in *Oryza sativa* Linn., is a Wnt/β-catenin pathway activator^[1]. A benzoate ester that is the methyl ester of vanillic acid. It has a role as an antioxidant and a plant metabolite.

IC₅₀ & Target

Human Endogenous Metabolite	Human Endogenous Metabolite
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In Vitro

Methyl vanillate (0-100 μ M) increases the expression and nuclear translocation of β -catenin in calvarial osteoblasts. Methyl vanillate dose-dependently elevates ALP activity in calvarial osteoblasts^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Death Dis. 2022 Feb 3;13(2):112.
- Med Oncol. 2022 Dec 28;40(1):64.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Cha PH, et al. Hovenia dulcis Thunb extract and its ingredient methyl vanillate activate Wnt/ β -catenin pathway and increase bone mass in growing or ovariectomized mice. PLoS One. 2014 Jan 22;9(1):e85546.

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

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