



# SZABO SCANDIC

Part of Europa Biosite

## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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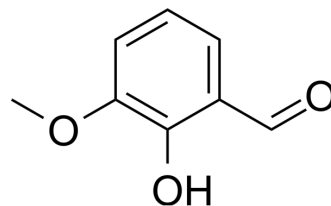
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## o-Vanillin

Cat. No.:	HY-Y1832
CAS No.:	148-53-8
Molecular Formula:	C <sub>8</sub> H <sub>8</sub> O <sub>3</sub>
Molecular Weight:	152.15
Target:	Fungal
Pathway:	Anti-infection
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 (657.25 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	Preparing Stock Solutions		1 mg	5 mg	10 mg
		1 mM	6.5725 mL	32.8623 mL	65.7246 mL
		5 mM	1.3145 mL	6.5725 mL	13.1449 mL
	10 mM	0.6572 mL	3.2862 mL	6.5725 mL	
Please refer to the solubility information to select the appropriate solvent.					

### BIOLOGICAL ACTIVITY

Description	o-Vanillin (2-Vanillin) is a nature product, could be extracted from <i>Vanilla planifolia</i> , <i>Pinus koraiensis</i> fruit. o-Vanillin is a potent antifungal agent. o-Vanillin inhibits the growth of mycelia by disrupting the integrity of cell walls and cell membranes. o-Vanillin inhibits <a href="#">Doxorubicin</a> (HY-15142A)- and 4-hydroperoxycyclophosphamide-induced NF-κB activation <sup>[1]</sup> [2].
In Vitro	o-Vanillin (2-Vanillin; 0-125 μg/mL; 24-72 h) inhibits the mycelial growth of <i>A. flavus</i> in a dose-dependent manner <sup>[1]</sup> . o-Vanillin (0-100 μg/mL; 48 h; <i>A. flavus</i> ) changes the morphology of mycelia and induces irregular shrinkage of the mycelia <sup>[1]</sup> . o-Vanillin (0-100 μg/mL; <i>A. flavus</i> ) decreases the protein content of the cell wall surface and the content of β-1,3-glucan <sup>[1]</sup> . o-Vanillin (0-100 μg/mL; <i>A. flavus</i> ) destroys cell membrane integrity. o-Vanillin releases cell constituents and decreases extracellular pH value <sup>[1]</sup> . o-Vanillin (0-100 μg/mL) could effectively inhibit the growth of <i>A. flavus</i> on corn kernels <sup>[1]</sup> . o-Vanillin (0-250 μM) inhibits doxorubicin-mediated induction of NFκB activity by 65% in A375/NFκB-Luc cells. o-Vanillin suppresses 4-HC-induced activity by 43% <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	o-Vanillin (2-Vanillin; 60 mg/kg; p.o.; daily, for 5 d) inhibits tumor growth in mice bearing A375 human melanoma xenografts [2].

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Animal Model:	Male NSG mice with A375 human melanoma xenografts (12-16 weeks of age) <sup>[2]</sup>
Dosage:	60 mg/kg
Administration:	Oral administration; daily, for 5 days
Result:	Delayed the growth of A375 human melanoma xenografts in immunodeficient NSG mice.

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## REFERENCES

[1]. Li Q, et, al. o-Vanillin, a promising antifungal agent, inhibits *Aspergillus flavus* by disrupting the integrity of cell walls and cell membranes. *Appl Microbiol Biotechnol*. 2021 Jun;105(12):5147-5158.

[2]. Marton A, et, al. Vanillin Analogues o-Vanillin and 2,4,6-Trihydroxybenzaldehyde Inhibit NF $\kappa$ B Activation and Suppress Growth of A375 Human Melanoma. *Anticancer Res*. 2016 Nov;36(11):5743-5750.

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

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