Product Data Sheet

Product Name: o-Vanillin
Cat. No.: GC67746

Chemical Properties

Cas. No.	148-53-8		
Formula	$C_8H_8O_3$	M.Wt	152.15
Solubility	DMSO : 100 mg/mL (657.25 mM; Need ultrasonic)	Storage	4°C, stored under nitrogen
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	o-Vanillin		

Background

o-Vanillin (2-Vanillin) is a nature product, could be extracted from *Vanilla planifolia, Pinus koraiensis* 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 Doxorubicin - and 4-hydroperoxycyclophosphamide-induced NF-κB activation[1][2].

o-Vanillin (2-Vanillin; 0-125 μg/mL; 24-72 h) inhibits the mycelial growth of*A. flavus* in a dose-dependent manner[1].
o-Vanillin (0-100 μg/mL; 48 h; *A. flavus*) changes the morphology of mycelia and induces irregular shrinkage of the mycelia[1].
o-Vanillin (0-100 μg/mL; *A. flavus*) decreases the protein content of the cell wall surface and the content of β-1,3-glucan[1].
o-Vanillin (0-100 μg/mL; *A. flavus*) destroys cell membrane integrity. o-Vanillin releases cell constituents and decreases extracellular pH value[1].
o-Vanillin (0-100 μg/mL) could effectively inhibit the growth of *A. flavus* on corn kernels[1].
o-Vanillin (0-250 μM) inhibits doxorubicin-mediated induction of NF?B activity by 65% in

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A375/NF?B-Luc cells. o-Vanillin suppresses 4-HC-induced activity by 43%[2].

o-Vanillin (2-Vanillin; 60 mg/kg; p.o.; daily, for 5 d) inhibits tumor growth in mice bearing A375 human melanoma xenografts[2].

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

[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?B Activation and Suppress Growth of A375 Human Melanoma. Anticancer Res. 2016 Nov;36(11):5743-5750.

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