

4-Vinylphenol

Chemical Properties

CAS No. :	2628-17-3
Formula:	C ₈ H ₈ O
Molecular Weight:	120.15
Storage:	Store at low temperature, Keep away from direct sunlight Powder: -20°C for 3 years In solvent: -80°C for 1 year <small>Actual storage temperature shall be subject to the COA.</small>



Biological Description

Description	4-Vinylphenol is the metabolite of p-coumaric and ferulic acid by lactic acid bacteria in wine found in <i>Hedyotis diffusa</i> Willd. 4-Vinylphenol induces apoptosis in vivo.
Targets(IC50)	Apoptosis, Endogenous Metabolite
In vitro	4-Vinylphenol (100 µg/mL) notably enhances caspase 3 expression, effectively making CSC-enriched MDAMB-231 cells more prone to apoptosis. At concentrations of 50 and 100 µg/mL, it dramatically inhibits cell proliferation in these cells. Furthermore, 4-Vinylphenol at a range of 12.5-200 µg/mL substantially decreases cell viability in parental MDA-MB-231 cells, with an IC50 value determined at 109 µg/mL. At lower doses (0.15, 0.3 µg/mL), it diminishes sphere formation and vimentin expression in CSCs, indicative of its potential in targeting breast cancer. Notably, 4-Vinylphenol cuts down ALDH1A1 expression by half in CSC-enriched MDA-MB-231 cells[1].

Solubility Information

Solubility	DMSO: 250 mg/mL (2080.73 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: 3.3 mg/mL (27.47 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	8.3229 mL	41.6146 mL	83.2293 mL
5 mM	1.6646 mL	8.3229 mL	16.6459 mL
10 mM	0.8323 mL	4.1615 mL	8.3229 mL
50 mM	0.1665 mL	0.8323 mL	1.6646 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

Leung HW, et al. The natural agent 4-vinylphenol targets metastasis and stemness features in breast cancer stem-like cells. *Cancer Chemother Pharmacol.* 2018 Aug;82(2):185-197.

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