4-Vinylphenol

Cat. No.: HY-W005288

CAS No.: 2628-17-3

Molecular Formula: C_8H_8O

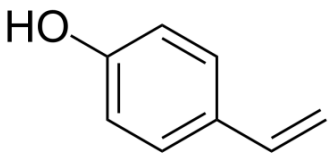
Molecular Weight: 120.15

Target: Apoptosis; Endogenous Metabolite

Pathway: Apoptosis; Metabolic Enzyme/Protease

Storage: -20°C, stored under nitrogen

* In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 150 mg/mL (1248.44 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	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

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 3.75 mg/mL (31.21 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 3.75 mg/mL (31.21 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 3.75 mg/mL (31.21 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

4-Vinylphenol is found in the medicinal herb Hedyotis diffusa Willd, wild rice and is also the metabolite of p-coumaric and ferulic acid by lactic acid bacteria in wine. 4-Vinylphenol induces apoptosis and inhibits blood vessels formation and suppresses invasive breast tumor growth in vivo[1].

In Vitro

4-Vinylphenol (12.5-200 μg/mL) significantly reduces cell viability in parental MDA-MB-231 cells, and the IC50 value is 109 μg/mL[1].

4-Vinylphenol (0.15 or 0.3 μg/mL; 3 days) reduces sphere formation and vimentin expression on CSCs in breast cancer[1].

4-Vinylphenol (50, 100 μg/mL; 72 hours) significantly suppresses cell proliferation in CSC-enriched MDA-MB-231 cells. 4-Vinylphenol significantly reduces ALDH1A1 expression by 50% in CSC-enriched MDA-MB-231 cells[1].

	4-Vinylphenol (100 μg/mL) significantly increases the expressions of caspase 3, likely sensitizing CSC-enriched MDAMB-231 cells to apoptosis[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. 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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