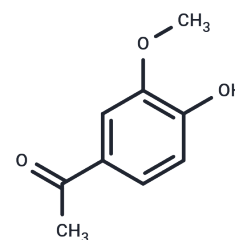


Apocynin

Chemical Properties

CAS No. :	498-02-2
Formula:	C ₉ H ₁₀ O ₃
Molecular Weight:	166.17
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



Biological Description

Description	Apocynin (NSC 2146) is a specific NADPH-oxidase inhibitor (IC ₅₀ : 10 μM).
Targets(IC ₅₀)	Apoptosis, Autophagy, NADPH
In vitro	Apocynin demonstrates anti-inflammatory activity by reducing neutrophil infiltration, the extent of spinal cord injury, the formation of PAR and nitrotyrosine, and the expression of ICAM-1 and P-selectin. It inhibits the degradation of IκB-α, activation of NF-κB, and apoptosis (as indicated by TUNEL staining, FAS ligand, Bax, and Bcl-2 expression), and the production of pro-inflammatory cytokines (TNF-α and IL-1β) and the activation of MAPK pathways (P-38 and phosphorylated-JNK). The LD ₅₀ in mice is 9 g/kg (p.o.). Apocynin is effective in various inflammatory cells and animal models. It attenuates the production of TNF-α and IL-1β, and the expression of iNOS in the lungs of mice treated with carrageenan. Moreover, apocynin offers beneficial effects in mouse models of spinal cord injury.
In vivo	Upon metabolic transformation, Apocynin can inhibit the assembly of NADPH oxidase, possibly due to the production of reactive oxygen species (ROS). It achieves this by inhibiting the serine phosphorylation of p47phox and disrupting its interaction with gp91phox, thereby inactivating NADPH oxidase activity. Furthermore, Apocynin reduces the generation of superoxide (O ₂ (-)) in activated macrophages and neutrophils.

Solubility Information

Solubility	DMSO: 250 mg/mL (1504.48 mM), Sonication is recommended. Ethanol: 16.6 mg/mL (99.9 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: 2 mg/mL (12.04 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	6.0179 mL	30.0897 mL	60.1793 mL
5 mM	1.2036 mL	6.0179 mL	12.0359 mL
10 mM	0.6018 mL	3.009 mL	6.0179 mL
50 mM	0.1204 mL	0.6018 mL	1.2036 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

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