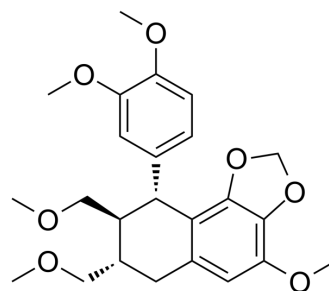


Hypophyllanthin

Cat. No.:	HY-N4108
CAS No.:	33676-00-5
Molecular Formula:	C ₂₄ H ₃₀ O ₇
Molecular Weight:	430.49
Target:	P-glycoprotein
Pathway:	Membrane Transporter/Ion Channel
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : 33.33 mg/mL (77.42 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	2.3229 mL	11.6147 mL	23.2293 mL	
		5 mM	0.4646 mL	2.3229 mL	4.6459 mL	
		10 mM	0.2323 mL	1.1615 mL	2.3229 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: 2.5 mg/mL (5.81 mM); Suspended solution; Need ultrasonic					
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (5.81 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Hypophyllanthin is a major lignan in <i>Phyllanthus</i> spp, with strong anti-inflammatory activity. Hypophyllanthin directly inhibits P-glycoprotein (P-gp) activity and did not interfere with multidrug resistance protein 2 (MRP2) activity ^{[1][2]} .
IC ₅₀ & Target	P-gp ^[2]
In Vitro	Hypophyllanthin down-regulates COX-2, TNF-α, and IL-1β gene expressions in U937 macrophages by interfering with the activation of NF-κB, MAPKs, and Akt ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Harikrishnan H, et al. Anti-Inflammatory Effects of Hypophyllanthin and Niranthin Through Downregulation of NF- κ B/MAPKs/PI3K-Akt Signaling Pathways. *Inflammation*. 2018 Jun;41(3):984-995.

[2]. Sukhaphirom N, et al. Phyllanthin and hypophyllanthin inhibit function of P-gp but not MRP2 in Caco-2 cells. *J Pharm Pharmacol*. 2013 Feb;65(2):292-9.

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

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