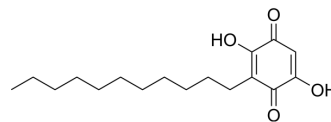


Embelin

Cat. No.:	HY-17473
CAS No.:	550-24-3
Molecular Formula:	C ₁₇ H ₂₆ O ₄
Molecular Weight:	294.39
Target:	IAP; NF-κB; Apoptosis; Autophagy
Pathway:	Apoptosis; NF-κB; Autophagy
Storage:	4°C, protect from light * In solvent : -80°C, 2 years; -20°C, 1 year (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : ≥ 50 mg/mL (169.84 mM)					
	* "≥" means soluble, but saturation unknown.					
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg
			1 mM	3.3969 mL	16.9843 mL	33.9685 mL
			5 mM	0.6794 mL	3.3969 mL	6.7937 mL
10 mM			0.3397 mL	1.6984 mL	3.3969 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 (8.49 mM); Suspended solution; Need ultrasonic					
	2. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 2.5 mg/mL (8.49 mM); Clear solution					

BIOLOGICAL ACTIVITY

Description	Embelin (Embelic acid), a potent, nonpeptidic XIAP inhibitor (IC ₅₀ =4.1 μM), inhibits cell growth, induces apoptosis, and activates caspase-9 in prostate cancer cells with high levels of XIAP. Embelin blocks NF-kappaB signaling pathway leading to suppression of NF-kappaB-regulated antiapoptotic and metastatic gene products. Embelin also induces autophagic and apoptotic cell death in human oral squamous cell carcinoma cells ^{[1][2][3]} .
IC ₅₀ & Target	XIAP 4.1 μM (IC ₅₀)
In Vitro	Embelin (Embelic acid) has a minimal effect on normal prostate epithelial and fibroblast cells with low levels of XIAP ^[1] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- Cell Res. 2021 Mar;31(3):291-311.
- Pharmacol Res. 2020 May;155:104751.
- Mol Neurobiol. 2014 Apr;49(2):1087-101.
- Mol Pharm. 2023 Jun 12.

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REFERENCES

- [1]. Nikolovska-Coleska Z, et al. Discovery of embelin as a cell-permeable, small-molecular weight inhibitor of XIAP through structure-based computational screening of a traditional herbal medicine three-dimensional structure database. *J Med Chem.* 2004;47(10):2430-2440.
- [2]. Ahn KS, et al. Embelin, an inhibitor of X chromosome-linked inhibitor-of-apoptosis protein, blocks nuclear factor-kappaB (NF-kappaB) signaling pathway leading to suppression of NF-kappaB-regulated antiapoptotic and metastatic gene products. *Mol Pharmacol.* 2007;71(1):209-219.
- [3]. Lee YJ, et al. XIAP inhibitor embelin induces autophagic and apoptotic cell death in human oral squamous cell carcinoma cells. *Environ Toxicol.* 2017;32(11):2371-2378.
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Caution: Product has not been fully validated for medical applications. For research use only.

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