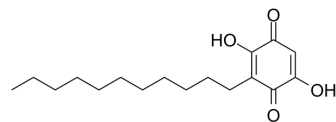


Embelin

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, 6 months; -20°C, 1 month (protect from light)



SOLVENT & SOLUBILITY

In Vitro	DMSO : ≥ 50 mg/mL (169.84 mM) * "≥" means soluble, but saturation unknown.																	
	<table border="1"> <thead> <tr> <th rowspan="2">Solvent Concentration</th> <th rowspan="2">Mass</th> <th>1 mg</th> <th>5 mg</th> <th>10 mg</th> </tr> </thead> <tbody> <tr> <td>1 mM</td> <td>3.3969 mL</td> <td>16.9843 mL</td> <td>33.9685 mL</td> </tr> <tr> <td>5 mM</td> <td>0.6794 mL</td> <td>3.3969 mL</td> <td>6.7937 mL</td> </tr> <tr> <td>10 mM</td> <td>0.3397 mL</td> <td>1.6984 mL</td> <td>3.3969 mL</td> </tr> </tbody> </table>	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
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Preparing Stock Solutions																		
Please refer to the solubility information to select the appropriate solvent.																		
In Vivo	<ol style="list-style-type: none"> 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 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.

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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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