

# Embelin

**Catalog No: tcsc1879**



## Available Sizes

**Size:** 10mg

**Size:** 50mg



## Specifications

**CAS No:**

550-24-3

**Formula:**

$C_{17}H_{26}O_4$

**Pathway:**

Apoptosis

**Target:**

IAP

**Purity / Grade:**

>98%

**Solubility:**

DMSO :  $\geq 50$  mg/mL (169.84 mM)

**Alternative Names:**

Embelic acid;Emberine;NSC 91874

**Observed Molecular Weight:**

294.39

## Product Description

Embelin is a cell-permeable benzoquinone compound that exhibits antitumor properties. Specifically antagonizes XIAP-mediated inhibition of caspase-9 activation by directly targeting the Smac and caspase-9 binding domain BIR3 (IC<sub>50</sub> = 4.1 uM in a competitive

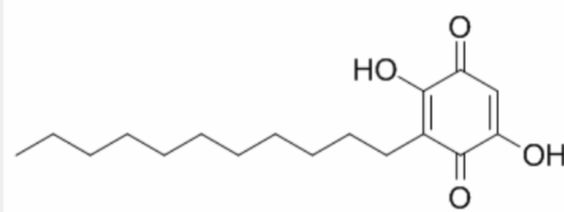
binding assay with Smac peptide).

IC50 value: 4.1 uM [1]

Target: XIAP

in vitro: Embelin induced activation of caspase-9 and embelin-induced apoptosis was prevented by caspase inhibitors [2]. Treatment with subtoxic doses of Embelin broadly sensitized malignant glioma cells to TRAIL-mediated apoptosis. Notably, human astrocytes were not significantly affected by the combined treatment consisting of Embelin and TRAIL. Combined treatment with Embelin and TRAIL augmented the activation of initiator caspases-8/-9 and effector caspases-3/-7, respectively [3].

in vivo: Embelin inhibited topical edema in the mouse ear, leading to substantial reductions in skin thickness and tissue weight, inflammatory cytokine production, neutrophil-mediated myeloperoxidase activity, and various histopathological indicators. Furthermore, embelin was effective at reducing inflammatory damage induced by chronic TPA exposure [4]. Embelin (10, 30 or 50mg/kg body weight) was administrated daily per oral route for 7days. Embelin significantly attenuated DSS-induced DAI scores and tissue MPO accumulation, which implied that it suppressed weight loss, diarrhea, gross bleeding, and the infiltrations of immune cells. Embelin administration also effectively and dose-dependently prevented shortening of colon length and enlargement of spleen size [5].



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