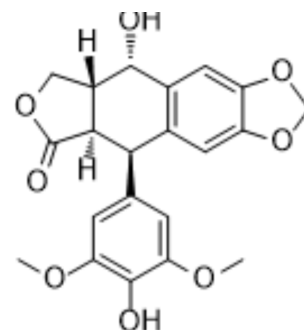


## 4'-Demethylepipodophyllotoxin

<b>Cat. No.:</b>	HY-17435		
<b>CAS No.:</b>	6559-91-7		
<b>Molecular Formula:</b>	C <sub>21</sub> H <sub>20</sub> O <sub>8</sub>		
<b>Molecular Weight:</b>	400.38		
<b>Target:</b>	Microtubule/Tubulin		
<b>Pathway:</b>	Cell Cycle/DNA Damage; Cytoskeleton		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 3.33 mg/mL (8.32 mM); ultrasonic and warming and heat to 60°C)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.4976 mL	12.4881 mL	24.9763 mL
	5 mM	0.4995 mL	2.4976 mL	4.9953 mL
	10 mM	---	---	---

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (6.24 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 2.5 mg/mL (6.24 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 2.5 mg/mL (6.24 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

4'-Demethylepipodophyllotoxin (4'-DMEP) is an intermediate compound that inhibits microtubule assembly.

#### In Vitro

4'-Demethylepipodophyllotoxin decreases the XooFtsZ'GTPase activity, and shows bacteriostatic effect (EC<sub>50</sub> = 38.7 μg/mL) against *Xanthomonas oryzae* pv. *oryzae* (Xoo)<sup>[3]</sup>.  
4'-Demethylepipodophyllotoxin shows cytotoxicity activity against tumor cells, with EC<sub>50</sub> of 0.31, 0.32, 0.37, 0.43 μM for HL-60, K-562, HepG2, KB cells<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## In Vivo

4'-Demethylepipodophyllotoxin (1 µg/mL, 200 µL, topical application, 24 weeks) reduces the tumor incidence, tumor volume, and the conversion efficiency of papillomas to squamous cell carcinomas in DMBA/TPA-induced mouse skin carcinogenesis model<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Cancer Immunol Res. 2023 May 3;11(5):583-599.
- Biochem Biophys Res Commun. 2017 Nov 4;493(1):718-722.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Xiang Zhou, et al. The discovery of natural 4'-demethylepipodophyllotoxin from renewable *Dyosma versipellis* species as a novel bacterial cell division inhibitor for controlling intractable diseases in rice. *Industrial Crops and Products*. Volume 174, 15 December 2021, 114182

[2]. Tang YJ, Zhao W, Li HM. Novel tandem biotransformation process for the biosynthesis of a novel compound, 4-(2,3,5,6-tetramethylpyrazine-1)-4'-demethylepipodophyllotoxin. *Appl Environ Microbiol*. 2011 May;77(9):3023-34.

[3]. Dhawan D, Balasubramanian S, Amonkar AJ. Chemopreventive effect of 4'-demethyl epipodophyllotoxin on DMBA/TPA-induced mouse skin carcinogenesis. *Carcinogenesis*. 1999 Jun;20(6):997-1003.

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

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