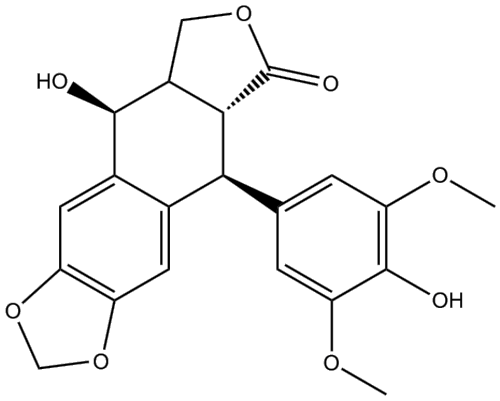
Product Data Sheet

Product Name: 4'-Demethylepipodophyllotoxin
Cat. No.: GC17271

Chemical Properties

Cas. No.	6559-91-7		
Chemical Name	6-oxo-1H-pyrazine-3-carboxylic acid		
SMILES	COC1=CC(=CC(=C1O)OC)C2C3C(COC3=O)C(C4=CC5=C(C=C24)OCO5)O		
Formula	$C_{21}H_{20}O_8$	M.Wt	400.38
Solubility	≥ 83.3 mg/mL in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

4'-Demethylepipodophyllotoxin(4'-DMEP) is a key intermediate compound for the preparation of podophyllotoxin-type anti-cancer drugs; a potent inhibitor of microtubule assembly.IC50 Value: 0.31uM(EC5 0in HL60 cell, MTT assay, 48h); 0.37uM(EC50 in HepG2 cell, MTT assay, 48h) [1]Target: microtubulein vitro: 4-TMP-DMEP showed strong cytotoxicity activity against the above-mentioned five tumor cell lines. The EC50s of 4-TMP-DMEP against these tumor cell lines ranged from 0.24 to 0.11 μM, which were 0.29 to 3618 times lower than that of DMEP [1].in vivo: Treatment

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of animals with DMEP (until the end of the experiment), 30 min before TPA treatment, significantly reduced the tumor incidence, tumor volume and the conversion efficiency of papillomas to squamous cell carcinomas. The tumor formation and growth was also delayed by DMEP pre-treatment [2].

References:

[1]. 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.
[2]. 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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