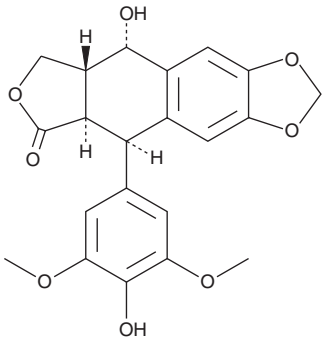
PRODUCT INFORMATION

4'-Demethylepipodophyllotoxin

Item No. 28393

CAS Registry No.:	6559-91-7
Formal Name:	(5R,5aR,8aR,9S)-5,8,8a,9-tetrahydro-9-hydroxy-5-(4-hydroxy-3,5-dimethoxyphenyl)-furo[3′,4′:6,7]naphtho[2,3-d]-1,3-dioxol-6(5aH)-one
Synonym:	(–)-4′-Demethylepipodophyllotoxin
MF:	$C_{21}H_{20}O_8$
FW:	400.4
Purity:	≥98%
UV/Vis.:	λ_{max}: 212, 285 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

4'-Demethylepipodophyllotoxin is supplied as a crystalline solid. A stock solution may be made by dissolving the 4'-demethylepipodophyllotoxin in the solvent of choice, which should be purged with an inert gas. 4'-Demethylepipodophyllotoxin is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of 4'-demethylepipodophyllotoxin in these solvents is approximately 10 and 5 mg/ml, respectively.

4'-Demethylepipodophyllotoxin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 4'-demethylepipodophyllotoxin should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 4'-Demethylepipodophyllotoxin has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

4'-Demethylepipodophyllotoxin is an inhibitor of tubulin polymerization (IC_{50} = 13 µM).[1] It inhibits the growth of human HepG2 liver, HeLa cervical, A549 lung, and BGC-823 stomach cancer cells *in vitro* (IC_{50}s = 18.74, 15.96, 52.08, and 21.26 µM, respectively).[2] 4'-Demethylepipodophyllotoxin also inhibits the growth of non-cancerous human HL-7702 liver cells (IC_{50} = 13.04 µM).

References

1. Daley, L., Guminski, Y., Demerseman, P., *et al.* Synthesis and antitumor activity of new glycosides of epipodophyllotoxin, analogues of etoposide, and NK 611. *J. Med. Chem.* **41(23)**, 4475-4485 (1998).
2. Zhao, W., Chen, L., Li, H.-M., *et al.* A rational design strategy of the novel topoisomerase II inhibitors for the synthesis of the 4-*O*-(2-pyrazinecarboxylic)-4'-demethylepipodophyllotoxin with antitumor activity by diminishing the relaxation reaction of topoisomerase II-DNA decatenation. *Bioorg. Med. Chem.* **22(11)**, 2998-3007 (2014).

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