

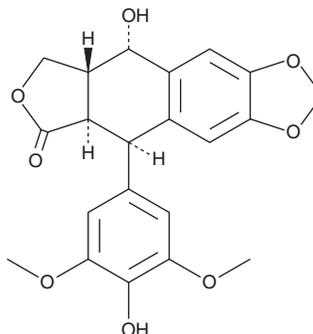
# PRODUCT INFORMATION



## 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<sub>21</sub>H<sub>20</sub>O<sub>8</sub>  
**FW:** 400.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 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<sub>50</sub> = 13 μM).<sup>1</sup> It inhibits the growth of human HepG2 liver, HeLa cervical, A549 lung, and BGC-823 stomach cancer cells *in vitro* (IC<sub>50</sub>s = 18.74, 15.96, 52.08, and 21.26 μM, respectively).<sup>2</sup> 4'-Demethylepipodophyllotoxin also inhibits the growth of non-cancerous human HL-7702 liver cells (IC<sub>50</sub> = 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).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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