

Product Name: Picropodophyllotoxin

Catalog No.: 2956

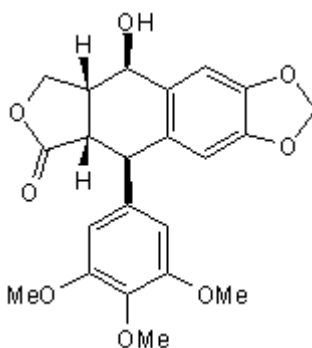
Batch No.: 4

CAS Number: 477-47-4

IUPAC Name: (5*R*,5*aS*,8*aR*,9*R*)-5,8,8*a*,9-Tetrahydro-9-hydroxy-5-(3,4,5-trimethoxyphenyl)-furo[3',4':6,7]naphtho[2,3-*dj*]-1,3-dioxol-6(5*aH*)-one

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂H₂₂O₈·½H₂O
Batch Molecular Weight: 423.42
Physical Appearance: White solid
Solubility: DMSO to 100 mM
Storage: Store at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	62.41	5.47	
Found	62.47	5.44	

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Orally active insulin-like growth factor 1 receptor (IGF1R) inhibitor that exhibits no activity at the insulin receptor, FGFR, PDGFR or EGFR. Inhibits IGF1R autophosphorylation (IC₅₀ ~ 1 nM), increases the fraction of cells in the G₂/M phase and upregulates apoptosis. Exhibits antiproliferative effects in multiple cancer cell lines (IC₅₀ = 0.05 - 15 μM), and has anticancer and antineovascularization activity in vivo.

Physical and Chemical Properties:

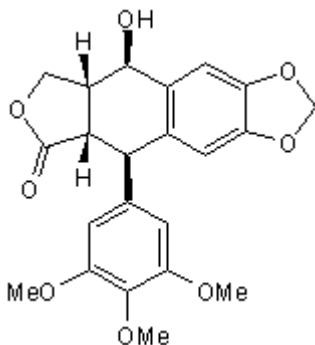
Batch Molecular Formula: C₂₂H₂₂O₈·½H₂O

Batch Molecular Weight: 423.42

Physical Appearance: White solid

Minimum Purity: >97%

Batch Molecular Structure:



References:

Girnit *et al* (2004) Cyclolignans as inhibitors of the insulin-like growth factor-1 receptor and malignant cell growth. *Cancer Res.* **64** 236. PMID: 14729630.

Stromberg *et al* (2006) IGF-1 receptor tyrosine kinase inhibition by the cyclolignan PPP induces G₂/M-phase accumulation and apoptosis in multiple myeloma cells. *Blood* **107** 669. PMID: 16166596.

Economou *et al* (2008) Inhibition of VEGF secretion and experimental choroidal neovascularization by picropodophyllin (PPP), an inhibitor of the insulin-like growth factor-1 receptor. *Invest.Ophthalmol.Vis.Sci.* **49** 2620. PMID: 18515591.

Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

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