

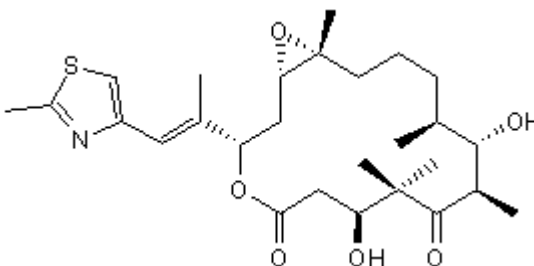
Certificate of Analysis

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Product Name: Epothilone B **Catalog No.:** 3502 **Batch No.:** 1
CAS Number: 152044-54-7
IUPAC Name: (1S,3S,7S,10R,11S,12S,16R)-7,11-Dihydroxy-8,8,10,12,16-pentamethyl-3-[(1E)-1-methyl-2-(2-methyl-4-thiazolyl)ethenyl]-4,17-dioxabicyclo[14.1.0]heptadecane-5,9-dione

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₇H₄₁NO₆S
Batch Molecular Weight: 507.68
Physical Appearance: White solid
Solubility: DMSO to 10 mM
Storage: Store at -20°C
Batch Molecular Structure:



2. ANALYTICAL DATA

Melting Point: Between 92 - 94°C
HPLC: Shows 98.7% purity
Mass Spectrum: Consistent with structure
Optical Rotation: $[\alpha]_D = -34$ (Concentration = 0.7, Solvent = Methanol)

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

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Description:

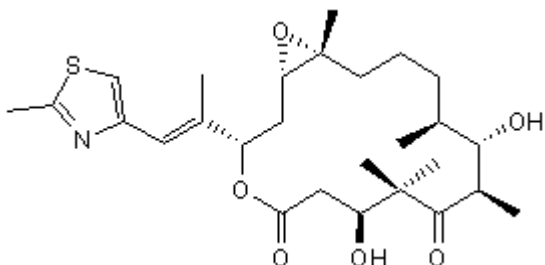
Microtubule stabilization agent that promotes tubulin polymerization and induces G₂-M cell cycle arrest (EC₅₀ = 32 nM in HeLa cells). Inhibits proliferation of human carcinoma cell lines in vitro, including MDR cells overexpressing the P-glycoprotein efflux pump. Exhibits potent cytotoxicity in MCF-7 and A549 cells (EC₅₀ values are 0.3 and 2.7 nM respectively). Inhibits growth of HCT-15 tumors in mice in vivo.

Physical and Chemical Properties:

Batch Molecular Formula: C₂₇H₄₁NO₆S
 Batch Molecular Weight: 507.68
 Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -20°C. This product is packaged under an inert atmosphere.

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 10 mM

CAUTION - This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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.

References:

Altmann et al (2000) Epothilones and related structures - a new class of microtubule inhibitors with potent in vivo antitumor activity. *Biochim.Biophys.Acta* **1470** M79. PMID: 10799747.

O'Reilly et al (2008) Pharmacokinetic profile of the microtubule stabilizer patupilone in tumor-bearing rodents and comparison of anti-cancer activity with other MTS in vitro and in vivo. *Cancer Chemother.Pharmacol.* **62** 1045. PMID: 18301895.

Narvi et al (2013) Altered TUBB3 expression contributes to the epothilone response of mitotic cells. *Br.J.Cancer* **108** 82. PMID: 23321512.

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