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:** \(C_{27}H_{41}NO_6S\)
- **Batch Molecular Weight:** 507.68
- **Physical Appearance:** White solid
- **Solubility:** DMSO to 10 mM
- **Storage:** Store at -20°C

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)
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Description:
Microtubule stabilization agent that promotes tubulin polymerization and induces G2-M cell cycle arrest (EC\(_{50}\) = 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 (EC\(_{50}\) 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: C\(_{27}\)H\(_{46}\)NO\(_8\)S
- Batch Molecular Weight: 507.68
- Physical Appearance: White solid
- Minimum Purity: >98%

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: