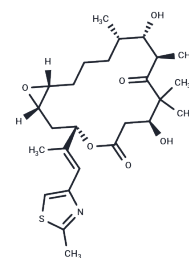


Epothilone A

Chemical Properties

CAS No. :	152044-53-6
Formula:	C ₂₆ H ₃₉ NO ₆ S
Molecular Weight:	493.66
Appearance:	no data available
Storage:	Powder: -20°C for 3 years In solvent: -80°C for 1 year



Biological Description

Description	Epothilone A (Epo A) is a microtubule-stabilizing agent with EC _{0.01} of 2 μM.
Targets(IC ₅₀)	Apoptosis, Microtubule Associated
In vivo	Epothilone A induces microtubule polymerization, causing cell cycle arrest at the G ₂ -M phase, and exhibits cytotoxicity, as well as induces apoptosis. It effectively inhibits the proliferation of HCT116 cells with an IC ₅₀ of 4.4 nM. Epothilone A possesses cytotoxicity against KB3-1, KBV-1, Hela, and Hs578T cells with IC ₅₀ values ranging from 13 nM to 160 nM. Additionally, Epothilone A competitively binds to microtubules against paclitaxel, with an IC ₅₀ of 2.3 μM.
Kinase Assay	Tubulin polymerization assay: Samples for electron microscopy are placed on carbon-over-Parlodion-coated grids (300 mesh) and negatively stained with 2% uranyl acetate. Microtubule assembly in the presence or absence of Epothilone A is monitored spectrophotometrically by using a spectrophotometer equipped with a thermostatically regulated liquid circulator. The temperature is held at 35 °C and changes in turbidity (representative of polymer mass) are monitored at 350 nm. Effective concentration (EC _{0.01}), defined as the interpolated concentration capable of inducing an initial slope of 0.01 OD/min rate, is calculated using the formula EC _{0.01} = concentration/slope.
Cell Research	Cell lines: KB3-1, KBV-1, Hela, and Hs578T cells. Concentrations: 0-2 μM. Method: cells are plated either in 48-well plates (for trypan blue and cell counting) or onto coverslips. After 24 hours, cells are treated with Epothilone A and are scored at regular intervals. For the cytotoxicity analysis, cells are counted and scored as trypan blue positive or negative.

Solubility Information

Solubility	H ₂ O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 92 mg/mL (186.4 mM), DMSO: 92 mg/mL (186.4 mM), < 1 mg/ml refers to the product slightly soluble or insoluble)
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A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.0257 mL	10.1284 mL	20.2569 mL
5 mM	0.4051 mL	2.0257 mL	4.0514 mL
10 mM	0.2026 mL	1.0128 mL	2.0257 mL
50 mM	0.0405 mL	0.2026 mL	0.4051 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Regueiro-Ren A , et al. Org Lett, 2001, 3(17), 2693-2696.

Bollag DM, et al. Cancer Res, 1995, 55(11), 2325-2333.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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