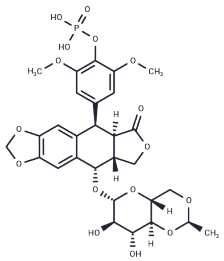
Data Sheet (Cat.No.T21303)

TargetMol

Etoposide Phosphate

Chemical Properties



CAS No. : 117091-64-2

Formula: C29H33O16P

Molecular Weight: 668.54

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Etoposide Phosphate is a selective and orally active topoisomerase II inhibitor and anticancer chemotherapy drug that inhibits cancer cell growth and induces apoptosis through DNA damage, the p53 pathway, and G2/M phase arrest of the cell cycle.
Targets(IC50)	Apoptosis,Antibacterial,Autophagy,DNA/RNA Synthesis,p53,Topoisomerase
In vitro	**Method**: A cell viability assay was performed using HCT116 FBXW+/+, FBXW-/-, and p53-/- cell lines. Cells were treated with various concentrations of Etoposide Phosphate (0.025, 0.05, 0.075, 0.1, 0.2, 0.4, 0.6, 0.8, and 1 μM) and incubated for 72 hours to evaluate its effect on cell growth inhibition. **Result**: Etoposide Phosphate inhibited the growth of HCT116 FBXW+/+, FBXW-/-, and p53-/- cells in a concentration-dependent manner. [2]
In vivo	**Method**: Female CD-1 mice were administered a single intravenous dose of Etoposide Phosphate at 50, 100, or 150 mg/kg. **Result**: At all dose levels, light microscopy revealed degeneration of dorsal root ganglion cells, as well as axonal degeneration of their distal and proximal processes in peripheral nerves, dorsal spinal roots, and the dorsal funiculi of the spinal cord. [3]

Solubility Information

Solubility	DMSO: 80 mg/mL (119.66 mM),Sonication is recommended. H2O: 2 mg/mL (2.99 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween-80+45% Saline: 5 mg/mL (7.48 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.4958 mL	7.479 mL	14.958 mL
5 mM	0.2992 mL	1.4958 mL	2.9916 mL
10 mM	0.1496 mL	0.7479 mL	1.4958 mL
50 mM	0.0299 mL	0.1496 mL	0.2992 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.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Witterland AH, et al. Etoposide Phosphate, the water soluble prodrug of etoposide. Pharm World Sci. 1996 Oct;18 (5):163-70.

Cui D, et al. FBXW7 Confers Radiation Survival by Targeting p53 for Degradation.Cell Rep. 2020 Jan 14;30(2):497-509.e4.

Bregman CL, et al. Etoposide- and BMY-40481-induced sensory neuropathy in mice.Toxicol Pathol. 1994 Sep-Oct; 22(5):528-35.

Levitt NC, Propper DJ, Madhusudan S, Braybrooke JP, Echeta C, Te Poele R, Davies SL, Flanagan E, Hickson ID, Joel S, Ganesan TS. Pharmacokinetically guided phase I trial of topotecan and etoposide phosphate in recurrent ovarian cancer. Br J Cancer. 2005 Jul 11;93(1):60-9. PubMed PMID: 15956976; PubMed Central PMCID: PMC2361471.