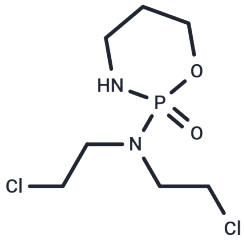
Data Sheet (Cat.No.T0707L)

TargetMol

Cyclophosphamide

Chemical Properties



CAS No. : 50-18-0

Formula: C7H15Cl2N2O2P

Molecular Weight: 261.09

Storage: Store at low temperature,Keep away from direct sunlight,Keep away from moisture,The compound is unstable in solution. Please use soon
Powder: -20°C for 3 years
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Cyclophosphamide is an alkylating agent type of anti-tumor drug, and its main target is DNA. Cyclophosphamide inhibits the proliferation of tumor cells by undergoing alkylation reactions with DNA, interfering with the replication and transcription processes of DNA.
Targets(IC50)	DNA,DNA Alkylator/Crosslinker,MRP
In vitro	**METHODS**: Human HL60 cells were treated with Cyclophosphamide, and cytotoxicity was detected by the MTT method. **RESULTS**: Cyclophosphamide inhibited the growth of HL60 cells, with an IC50 of 8.79 μM. [1] **METHODS**: Human K562 cells were treated with Cyclophosphamide for 48 hours, and the cell growth inhibition was detected by the MTT method. **RESULTS**: Cyclophosphamide inhibited the growth of K562 cells, with an IC50 of 0.153 μM. **METHODS**: Human MCF7 cells were treated with Cyclophosphamide for 48 hours, and cytotoxicity was detected using the SRB method. **RESULTS**: Cyclophosphamide inhibited the growth of K562 cells, with an IC50 of 10 mM. [2] **METHODS**: COS-1 cells and HCT-15 cells were treated with Cyclophosphamide for 24 hours, and cytotoxicity was detected by the MTT method. **RESULTS**: Cyclophosphamide inhibited the growth of COS-1 cells (IC50=125.43 μM) and HCT-15 cells (IC50=74.32 μM). [3] **METHODS**: DU-145 cells were treated with Cyclophosphamide, and cytotoxicity was detected by the MTT method. **RESULTS**: Cyclophosphamide inhibited DU-145 cells (IC50=52.5 μM). [4] **METHODS**: HCT-15 cells and HEK-293T cells were treated with Cyclophosphamide for 24 hours, and the cell growth inhibition was detected by the MTT method. **RESULTS**: Cyclophosphamide inhibited the growth of COS-1 cells (IC50=76.32 μM) and did not inhibit the growth of HEK-293T cells (IC5> 100 μM). [5]
In vivo	**METHODS**: Cyclophosphamide induces ovarian insufficiency (POI) by activating primordial follicles. Cyclophosphamide (150 mg/kg; Intraperitoneal injection A single

In vivo	dose was injected into 5-week-old female Balb/C mice. **RESULTS**: The number of primary follicles in the ovaries decreases. [6] **METHODS**: Cyclophosphamide induces bone marrow suppression by interfering with the proliferation and differentiation of bone marrow (BM) cells. Cyclophosphamide (150 mg/kg; Intraperitoneal injection A single dose was injected into 56-week-old male Swiss mice. **RESULTS**: It causes significant changes in the structure of bone marrow tissue, reduces the bone marrow/red blood cell ratio, and decreases the number of white blood cells in the blood. [7]

Solubility Information

Solubility	H2O: 20 mg/mL (76.6 mM),Sonication is recommended. The compound is unstable in solution, please use soon. DMSO: 255 mg/mL (976.67 mM),The compound is unstable in solution, please use soon. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	Saline: 20 mg/mL (76.6 mM),Sonication is recommended. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (19.15 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 vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.8301 mL	19.1505 mL	38.301 mL
5 mM	0.766 mL	3.8301 mL	7.6602 mL
10 mM	0.383 mL	1.915 mL	3.8301 mL
50 mM	0.0766 mL	0.383 mL	0.766 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

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