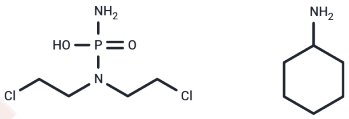
Data Sheet (Cat.No.T36701)

TargetMol

Phosphoramide mustard cyclohexanamine

Chemical Properties



CAS No. : 1566-15-0

Formula: C10H24Cl2N3O2P

Molecular Weight: 320.20

Storage: Keep away from direct sunlight
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	Phosphoramide mustard cyclohexanamine is the active metabolite of cyclophosphamide, an alkylating agent that cross-links DNA strands, organizes cell division and causes cell death, and has antitumor activity.
Targets(IC50)	DNA Alkylation,DNA Alkylator/Crosslinker,Drug Metabolite
In vitro	Phosphoramide mustard cyclohexanamine induces DNA cross-linking and damage in SIGC cells, reducing cell viability in a dose-dependent manner. Cell viability is significantly decreased at concentrations of 3 μM and 6 μM after 48 hours of exposure. Phosphoramide mustard cyclohexanamine induces DNA cross-linking and damage in SIGC cells, reducing cell viability in a dose-dependent manner. Cell viability is significantly decreased at concentrations of 3 μM and 6 μM after 48 hours of exposure. Phosphoramide mustard cyclohexanamine also elevates mRNA and protein expression of genes involved in DNA damage response (DDR), indicating activation of DDR pathways. also elevates mRNA and protein expression of genes involved in DNA damage response (DDR), indicating activation of DDR pathways.
In vivo	Administration of Phosphoramide mustard cyclohexanamine at 3-6 mg/kg in rats reduces bone marrow cell viability and induces DNA adduct formation and damage within 24-48 hours[1].

Solubility Information

Solubility	H2O: 50.00 mg/mL (156.15 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.123 mL	15.6152 mL	31.2305 mL
5 mM	0.6246 mL	3.123 mL	6.2461 mL
10 mM	0.3123 mL	1.5615 mL	3.123 mL
50 mM	0.0625 mL	0.3123 mL	0.6246 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

Ganesan S, Keating AF. Phosphoramide mustard exposure induces DNA adduct formation and the DNA damage repair response in rat ovarian granulosa cells. Toxicol Appl Pharmacol. 2015 Feb 1;282(3):252-8.
S Genka, et al. Brain and plasma pharmacokinetics and anticancer activities of cyclophosphamide and phosphoramide mustard in the rat. Cancer Chemother Pharmacol. 1990;27(1):1-7.

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