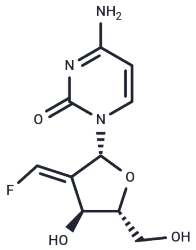
Data Sheet (Cat.No.T60401)

TargetMol

Tezacitabine

Chemical Properties



CAS No. : 130306-02-4

Formula: C10H12FN3O4

Molecular Weight: 257.22

Storage: 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	Tezacitabine is a cytostatic and cytotoxic antimetabolite and a nucleoside analogue with a dual mechanism of action that irreversibly inhibits ribonucleotide reductase and can be incorporated into DNA during replication or repair, causing DNA chain termination. It blocks tumor cells in the G1 and S phases of the cell cycle, inducing apoptotic cell death, with potential applications in treating leukemia and solid tumors[1][2].
Targets(IC50)	Apoptosis,Nucleoside Antimetabolite/Analog,Others,DNA/RNA Synthesis
In vitro	Tezacitabine (0.01-10 μM; 24 hours; CCRF-SB, KG-1, Jurkat, COLO-205, MCF-7 and PC-3 cells) treatment leads to the G1 and S-phase leaky block of the cell cycle [1]. Tezacitabine (0.01-10 μM; 24 hours; CCRF-SB, KG-1, Jurkat, COLO-205, MCF-7 and PC-3 cells) treatment concentration-dependently apoptosis the cells by the caspase 3/7 pathway[1]. Tezacitabine has highly cytostatic and cytotoxic properties. The cytotoxic effect of tezacitabine is manifested not only in apoptosis but also in changes in protein metabolism[1]. Cell Cycle Analysis [1] Cell Line: CCRF-SB, KG-1, Jurkat, COLO-205, MCF-7 and PC-3 cells Concentration: 0.01 μM, 0.1 μM, 1.0 μM, and 10 μM Incubation Time: 24 hours Result: Induced leaky block of the G1 (at concentrations higher than 10 nM) and S-phase (at low concentration) of the cell cycle. Apoptosis Analysis [1] Cell Line: CCRF-SB, KG-1, Jurkat, COLO-205, MCF-7 and PC-3 cells Concentration: 0.01 μM, 0.1 μM, 1.0 μM, and 10 μM Incubation Time: 24 hours Result: Concentration-dependently induced apoptotic death of cells by the caspase 3/7 pathway.
In vivo	Tezacitabine (100 mg/kg; intraperitoneal injection; daily; female nude mice) treatment inhibits tumor growth in HCT 116 tumor xenografts over 14 days in 7-9-week-old female nude mice injected with HCT 116 cells [2].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.8877 mL	19.4386 mL	38.8772 mL
5 mM	0.7775 mL	3.8877 mL	7.7754 mL
10 mM	0.3888 mL	1.9439 mL	3.8877 mL
50 mM	0.0778 mL	0.3888 mL	0.7775 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.

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