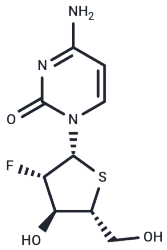
Data Sheet (Cat.No.T39290)

TargetMol

FF-10502

Chemical Properties



CAS No. : 184302-49-6

Formula: C9H12FN3O3S

Molecular Weight: 261.27

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	FF-10502 is a pyrimidine nucleoside antimetabolite and a structural analog of Gemcitabine. This compound effectively inhibits DNA polymerase α and β, demonstrating potent anticancer activity by targeting dormant cells.
Targets(IC50)	Nucleoside Antimetabolite/Analog,Others,DNA/RNA Synthesis
In vitro	FF-10502, at concentrations ranging from 0.1 nM to 10 μM and administered over a 72-hour period, demonstrated growth inhibition in various human pancreatic cancer cell lines. Specifically, the IC50 values were determined to be 59.9 nM for BxPC-3, 39.6 nM for SUIT-2, 68.2 nM for Capan-1, and 331.4 nM for MIA PaCa-2 cells, respectively[1]. This efficacy was observed in a Cell Viability Assay, signifying FF-10502's potential in inhibiting pancreatic cancer cell proliferation.
In vivo	FF-10502, administered intravenously at doses ranging from 120 to 480 mg/kg once weekly for four weeks, exhibited a dose-dependent antitumor effect in a mouse xenograft model. This model involved the subcutaneous implantation of the human pancreatic cancer cell line Capan-1 into five-week-old female nude mice (BALB/c-nu/nu). The study revealed that FF-10502 significantly suppressed tumor growth, with efficacy increasing with the dosage.

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.8275 mL	19.1373 mL	38.2746 mL
5 mM	0.7655 mL	3.8275 mL	7.6549 mL
10 mM	0.3827 mL	1.9137 mL	3.8275 mL
50 mM	0.0765 mL	0.3827 mL	0.7655 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

Shinji Mima, et al. FF-10502, an Antimetabolite with Novel Activity on Dormant Cells, Is Superior to Gemcitabine for Targeting Pancreatic Cancer Cells. J Pharmacol Exp Ther. 2018 Jul;366(1):125-135.