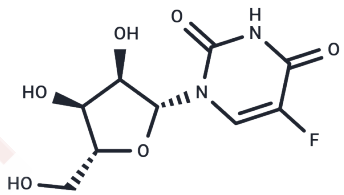
Data Sheet (Cat.No.T1349)

TargetMol

5-Fluorouridine

Chemical Properties



CAS No. : 316-46-1

Formula: C9H11FN2O6

Molecular Weight: 262.19

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	5-Fluorouridine is a metabolite of 5-fluorouracil that inhibits rRNA synthesis in human colon cancer cells and exhibits antitumor and antiviral activity. 5-Fluorouridine exerts a cytotoxic effect on the growth of L1210 cells, with an IC_{50} value of 2 nM. 5-Fluorouridine binds to poly-A RNA and exhibits antiproliferative activity. 5-Fluorouridine can be used in studies of nucleic acid metabolism, cancer chemotherapy, and viral replication mechanisms.
Targets(IC50)	Apoptosis,DNA/RNA Synthesis,Drug Metabolite
In vivo	**Methods**: Normal ddY mice were immunized with sheep red blood cells (SRBC) via intravenous injection. From the day of immunization, 5-Fluorouridine (0.025, 0.05, 0.1 mmol/kg) was administered orally once daily for 10 consecutive days. Blood samples were collected on days 5 and 10 post-immunization, and IgM and IgG antibody titers against SRBC were detected by ELISA. **Results**: At a dose of 0.1 mmol/kg, 5-Fluorouridine significantly suppressed the production of both IgM and IgG antibodies.[1]

Solubility Information

Solubility	DMSO: 250 mg/mL (953.51 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	5% DMSO+95% Saline: 1.25 mg/mL (4.77 mM),Solution. 10% DMSO+90% Saline: 10 mg/mL (38.14 mM),Suspension. *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	3.814 mL	19.0701 mL	38.1403 mL
5 mM	0.7628 mL	3.814 mL	7.6281 mL
10 mM	0.3814 mL	1.907 mL	3.814 mL
50 mM	0.0763 mL	0.3814 mL	0.7628 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

Mori H, et al. Novel derivatives of 5-fluorouridine and 5-fluorouracil having potent antitumor and lower immunosuppressive activities. Jpn J Pharmacol. 1992 Mar;58(3):269-82.
Wu H, Zhang L, Chen B, et al.B13, a well-tolerated inhibitor of hedgehog pathway, exhibited potent anti-tumor effects against colorectal carcinoma in vitro and in vivo.Bioorganic Chemistry.2023: 106488.