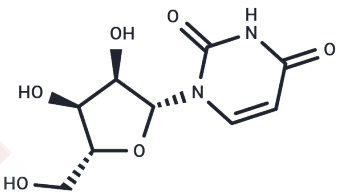
Data Sheet (Cat.No.T2221)

TargetMol

Uridine

Chemical Properties



CAS No. : 58-96-8

Formula: C9H12N2O6

Molecular Weight: 244.20

Storage: Keep away from direct sunlight,Store at low temperature
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	Uridine (Uridin) is a nucleoside compound, one of the four bases that make up RNA, that replaces thymine in DNA during transcription and pairs with adenine.
Targets(IC50)	Nucleoside Antimetabolite/Analog,NF-κB,Endogenous Metabolite
In vitro	**METHODS**: HCC cells HEPG2, HLF and 97H were treated with Uridine (0-600 μM) for 48 h. Cell viability was measured by CCK8 assay. **RESULTS**: The proliferative capacity of the three HCC cells was significantly inhibited in a dose-dependent manner. [1] **METHODS**: Differentiated PC-12 cells were treated with Uridine (50 μM) for 4 days, and the expression levels of target proteins were measured by Western Blot. **RESULTS**: Uridine treatment enhanced neurofilament expression in differentiated PC12 cells, and NF-M and NF-70 expression were significantly increased after Uridine treatment. [2]
In vivo	**METHODS**: To detect anti-tumor activity in vivo, Uridine (100-300 mg/kg) was injected locally into BALB/c nude mice bearing 97H xenografts once daily for sixteen days. **RESULTS**: Both doses of Uridine significantly reduced the tumor size of subcutaneous tumors in HCC nude mice in a dose-dependent manner. [1]
Kinase Assay	Microtubule depolymerizing activity: The effects of 2-Methoxyestradiol on cellular microtubule depolymerization are determined by indirect immunofluorescence techniques in rat aortic smooth muscle A-10 cells. Microtubules are visualized using a β-tubulin antibody. Three viewers determines the percent microtubule loss for each treatment concentration. The data are averaged and plotted as percent microtubule loss versus drug concentration and the EC50s for microtubule depolymerization calculated from the log dose-response curves.

Solubility Information

Solubility	DMSO: 240.00 mg/mL (982.80 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), H2O: 45.00 mg/mL (184.28 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5.00 mg/mL (20.48 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	4.095 mL	20.475 mL	40.950 mL
5 mM	0.819 mL	4.095 mL	8.190 mL
10 mM	0.4095 mL	2.0475 mL	4.095 mL
50 mM	0.0819 mL	0.4095 mL	0.819 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

Zi L, et al. Uridine Inhibits Hepatocellular Carcinoma Cell Development by Inducing Ferroptosis. J Clin Med. 2023 May 18;12(10):3552.

Zeng X, Shi C, Han Y, et al.A metabolic atlas of blood cells in young and aged mice identifies uridine as a metabolite to rejuvenate aged hematopoietic stem cells.Nature Aging.2024: 1-16.

Pooler AM, et al. Uridine enhances neurite outgrowth in nerve growth factor-differentiated PC12 [corrected]. Neuroscience. 2005;134(1):207-14.

Zheng M, Li J, Guo H, et al.IMPDH inhibitors upregulate PD-L1 in cancer cells without impairing immune checkpoint inhibitor efficacy.Acta Pharmacologica Sinica.2024: 1-10.