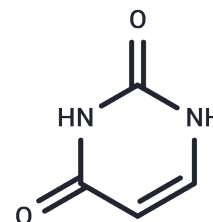


Uracil

Chemical Properties

CAS No. :	66-22-8
Formula:	C ₄ H ₄ N ₂ O ₂
Molecular Weight:	112.09
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	Uracil is a common naturally occurring pyrimidine found in RNA, it base pairs with adenine and is replaced by thymine in DNA. Methylation of uracil produces thymine. Uracil's use in the body is to help carry out the synthesis of many enzymes necessary for cell function through bonding with riboses and phosphates. Uracil serves as allosteric regulator and coenzyme for many important biochemical reactions.
Targets(IC50)	Endogenous Metabolite
In vivo	Uracil serves both as a pharmaceutical agent and as a vehicle for drug delivery. In humans and plants, uracil functions is a conformational regulator and coenzyme in various reactions. It also plays a role in the biosynthesis of polysaccharides and the transportation of aldoses. Uracil reacts with fluorine to form 5-fluorouracil, which inhibits RNA polymerase, obstructing RNA synthesis and consequently suppressing the growth of cancer cells. Within the body, uracil binds with ribose and phosphate, aiding insynthesizing enzymes essential for numerous cellular functions.

Solubility Information

Solubility	DMSO: 41.25 mg/mL (368.01 mM),Sonication is recommended. H ₂ O: < 1 mg/mL (insoluble or slightly soluble), Ethanol: 21 mg/mL (187.35 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 4.13 mg/mL (36.85 mM),Solution. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (17.84 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	8.9214 mL	44.607 mL	89.214 mL
5 mM	1.7843 mL	8.9214 mL	17.8428 mL
10 mM	0.8921 mL	4.4607 mL	8.9214 mL
50 mM	0.1784 mL	0.8921 mL	1.7843 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

Imming P, et al. Nat Rev Drug Discov. 2006 Oct; 5(10):821-34.

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