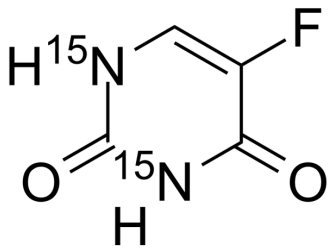
5-Fluorouracil-$^{15}N_2$

Cat. No.:	HY-90006S2
CAS No.:	68941-95-7
Molecular Formula:	$C_4H_3F^{15}N_2O_2$
Molecular Weight:	132.06
Target:	Apoptosis; Nucleoside Antimetabolite/Analog; HIV; Endogenous Metabolite
Pathway:	Apoptosis; Cell Cycle/DNA Damage; Anti-infection; Metabolic Enzyme/Protease
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

H2O : 16.67 mg/mL (126.23 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	7.5723 mL	37.8616 mL	75.7232 mL
	5 mM	1.5145 mL	7.5723 mL	15.1446 mL
	10 mM	0.7572 mL	3.7862 mL	7.5723 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

5-Fluorouracil-$^{15}N_2$ is the ^{15}N-labeled 5-Fluorouracil. 5-Fluorouracil (5-FU) is an analogue of uracil and a potent antitumor agent. 5-Fluorouracil affects pyrimidine synthesis by inhibiting thymidylate synthetase thus depleting intracellular dTTP pools. 5-Fluorouracil induces apoptosis and can be used as a chemical sensitizer[1][2]. 5-Fluorouracil also inhibits HIV[3].

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

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[4]. Yin L, et al. Antitumor effects of oncolytic herpes simplex virus type 2 against colorectal cancer in vitro and in vivo. Ther Clin Risk Manag. 2017 Feb 7;13:117-130.

[5]. Snyder SM, et al. Initial Experience with Topical Fluorouracil for Treatment of HIV-Associated Anal Intraepithelial Neoplasia. J Int Assoc Physicians AIDS Care (Chic). 2011;10(2):83-88.

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