

Product Data Sheet

5-Fluorouracil-13C,15N2

 Cat. No.:
 HY-90006S1

 CAS No.:
 1189423-58-2

 Molecular Formula:
 C₃ ¹³CH₃F ¹⁵N₂O₂

Molecular Weight: 133.06

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

In solvent

4°C 2 years -80°C 6 months

-20°C 1 month

BIOLOGICAL ACTIVITY

Description	5-Fluorouracil- ¹³ C, ¹⁵ N ₂ is the ¹³ C and ¹⁵ N labeled 5-Fluorouracil[1]. 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[2][3]. 5-Fluorouracil also inhibits HIV[4].
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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- [2]. Han R, et al. Amphiphilic dendritic nanomicelle-mediated co-delivery of 5-fluorouracil and NSC 123127 for enhanced therapeutic efficacy. J Drug Target. 2016 Jun 29:1-28. [Epub ahead of print]
- [3]. McQuade RM, et al. Gastrointestinal dysfunction and enteric neurotoxicity following treatment with anticancer chemotherapeutic agent 5-fluorouracil. Neurogastroenterol Motil. 2016 Jun 28.
- [4]. Zeng Q, et al. Knockdown of NFBD1/MDC1 enhances chemosensitivity to NSC 119875 or 5-fluorouracil in nasopharyngeal carcinoma CNE1 cells. Mol Cell Biochem. 2016 Jul418(1-2):137-46.
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 $\label{lem:caution:Product} \textbf{Caution: Product has not been fully validated for medical applications. For research use only.}$

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