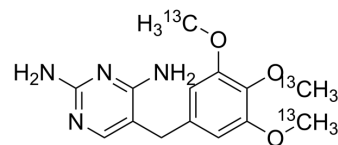


Trimethoprim-¹³C₃

Cat. No.:	HY-B0510S3
CAS No.:	1189970-95-3
Molecular Formula:	C ₁₁ ¹³ C ₃ H ₁₈ N ₄ O ₃
Molecular Weight:	293.3
Target:	Isotope-Labeled Compounds; Antibiotic; Bacterial; Antifolate; Influenza Virus
Pathway:	Others; Anti-infection; Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Trimethoprim- ¹³ C ₃ is the deuterium labeled Trimethoprim (HY-B0510) ^[1] . Trimethoprim is a bacteriostatic antibiotic and an orally active dihydrofolate reductase inhibitor. Trimethoprim is active against a wide range of Gram-positive and Gram-negative aerobic bacteria. Trimethoprim has the potential for the research of urinary tract infections, Shigellosis and Pneumocystis pneumonia. Trimethoprim can inhibit infection of Influenza A virus in chick embryo when combined with zinc ^{[2][3][4][5]} .
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

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019 Feb;53(2):211-216.

Caution: Product has not been fully validated for medical applications. For research use only.

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