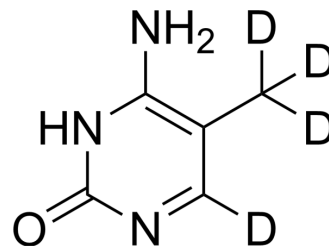


## 5-Methylcytosine-d<sub>4</sub>

<b>Cat. No.:</b>	HY-W008091S		
<b>CAS No.:</b>	1219795-15-9		
<b>Molecular Formula:</b>	C <sub>5</sub> H <sub>3</sub> D <sub>4</sub> N <sub>3</sub> O		
<b>Molecular Weight:</b>	129.15		
<b>Target:</b>	DNA/RNA Synthesis; Endogenous Metabolite		
<b>Pathway:</b>	Cell Cycle/DNA Damage; Metabolic Enzyme/Protease		
<b>Storage:</b>	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



### BIOLOGICAL ACTIVITY

#### Description

5-Methylcytosine-d<sub>4</sub> is the deuterium labeled 5-Methylcytosine[1]. 5-Methylcytosine is a well-characterized DNA modification, and is also predominantly in abundant non-coding RNAs in both prokaryotes and eukaryotes. 5-Methylcytosine in mRNA is a new epitranscriptome marker in Arabidopsis, and that regulation of this modification is an integral part of gene regulatory networks underlying plant development[2].

#### 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<sup>[1]</sup>.  
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.
- [2]. Cui X, et al. 5-Methylcytosine RNA Methylation in Arabidopsis Thaliana. *Mol Plant*. 2017 Nov 6;10(11):1387-1399.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA