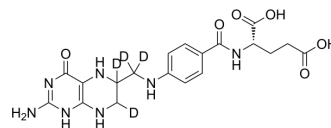


## Tetrahydrofolic acid-d<sub>4</sub>

Cat. No.:	HY-14520S
CAS No.:	1356841-72-9
Molecular Formula:	C <sub>19</sub> H <sub>19</sub> D <sub>4</sub> N <sub>7</sub> O <sub>6</sub>
Molecular Weight:	449.45
Target:	Endogenous Metabolite; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



### BIOLOGICAL ACTIVITY

<b>Description</b>	Tetrahydrofolic acid-d <sub>4</sub> is the deuterium labeled Tetrahydrofolic acid. Tetrahydrofolic acid (L-5,6,7,8-Tetrahydrofolic acid) is the biologically active vitamin B9 folate derivative. Tetrahydrofolic acid is a donor of one-carbon groups for amino acids, nucleic acids, and lipids. Tetrahydrofolic acid serves as an acceptor of free formaldehyde, producing 5,10-methylenetetrahydrofolate-Tetrahydrofolic acid[1][2].
<b>In Vitro</b>	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;53(2):211-216.
- [2]. Clara B García-Calderón, et al. Genotoxicity of Tetrahydrofolic Acid to Hematopoietic Stem and Progenitor Cells. *Cell Death Differ.* 2018 Nov;25(11):1967-1979.

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

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