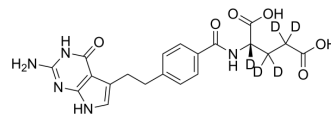


Pemetrexed-d₅

Cat. No.:	HY-10820S
CAS No.:	1129408-57-6
Molecular Formula:	C ₂₀ H ₁₆ D ₅ N ₅ O ₆
Molecular Weight:	432.44
Target:	Antifolate; Autophagy
Pathway:	Cell Cycle/DNA Damage; Autophagy
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Pemetrexed-d ₅ is the deuterium labeled Pemetrexed[1]. Pemetrexed (LY231514) is an antifolate, the Ki values of the pentaglutamate of Pemetrexed (LY231514) are 1.3, 7.2, and 65 nM for inhibits thymidylate synthase (TS), dihydrofolate reductase (DHFR), and glycinamide ribonucleotide formyltransferase (GARFT), respectively[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 ^[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.
- [2]. Shih C, et al. LY231514, a pyrrolo[2,3-d]pyrimidine-based antifolate that inhibits multiple folate-requiring enzymes. *Cancer Res.* 1997 Mar 15;57(6):1116-23.
- [3]. Anraku M, et al. Synergistic antitumor effects of regulatory T cell blockade combined with pemetrexed in murine malignant mesothelioma. *J Immunol.* 2010 Jul 15;185(2):956-66.

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

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