Leflunomide-d4

Cat. No.: HY-B0083S

CAS No.: 1189987-23-2

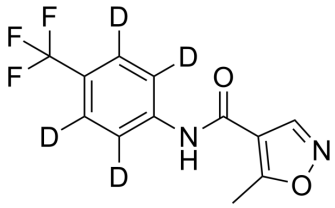
Molecular Formula: $C_{12}H_5D_4F_3N_2O_2$

Molecular Weight: 274.23

Target: Dihydroorotate Dehydrogenase

Pathway: Metabolic Enzyme/Protease

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Leflunomide-d_4 (HWA486-d4) is the deuterium labeled Leflunomide. Leflunomide is a pyrimidine synthesis inhibitor, inhibiting dihydroorotate dehydrogenase (DHODH), and acts as a disease-modifying antirheumatic agent[1][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;53(2):211-216.

[2]. Davis JP, et al. The immunosuppressive metabolite of leflunomide is a potent inhibitor of human dihydroorotate dehydrogenase. Biochemistry. 1996 Jan 30;35(4):1270-3.

[3]. Xu X, et al. Inhibition of protein tyrosine phosphorylation in T cells by a novel immunosuppressive agent, leflunomide. J Biol Chem. 1995 May 26;270(21):12398-403.

[4]. Fox RI, et al. Mechanism of action for leflunomide in rheumatoid arthritis. Clin Immunol. 1999 Dec;93(3):198-208.

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