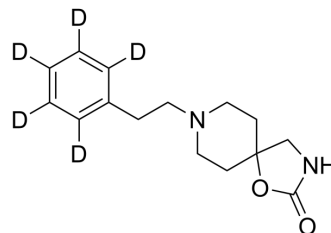


Fenspiride-d₅

Cat. No.:	HY-A0027AS
CAS No.:	1246911-67-0
Molecular Formula:	C ₁₅ H ₁₅ D ₅ N ₂ O ₂
Molecular Weight:	265.36
Target:	Phosphodiesterase (PDE); Histamine Receptor; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; GPCR/G Protein; Immunology/Inflammation; Neuronal Signaling; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Fenspiride-d ₅ is the deuterium labeled Fenspiride. Fenspiride, an orally active non-steroidal antiinflammatory agent, is an antagonist of H ₁ -histamine receptor. Fenspiride inhibites phosphodiesterase 3 (PDE3), phosphodiesterase 4 (PDE4) and phosphodiesterase 5 (PDE5) activities with -log IC ₅₀ values of 3.44, 4.16 and approximately 3.8, respectively. Fenspiride can be used for the research of respiratory diseases[1][2][3].
IC₅₀ & Target	H ₁ Receptor
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]. Matuszewska A, et al. Long-term administration of fenspiride has no negative impact on bone mineral density and bone turnover in young growing rats. *Adv Clin Exp Med.* 2019 Jun;28(6):771-776.
- [3]. Cortijo J, et al. Effects of fenspiride on human bronchial cyclic nucleotide phosphodiesterase isoenzymes: functional and biochemical study. *Eur J Pharmacol.* 1998 Jan 2;341(1):79-86.
- [4]. De Castro CM, et al. Fenspiride: an anti-inflammatory drug with potential benefits in the treatment of endotoxemia. *Eur J Pharmacol.* 1995 Dec 29;294(2-3):669-76.

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

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