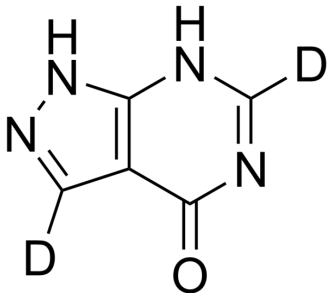
Allopurinol-d_2

Cat. No.:	HY-B0219S
CAS No.:	916979-34-5
Molecular Formula:	$C_5H_2D_2N_4O$
Molecular Weight:	138.12
Target:	Xanthine Oxidase; Isotope-Labeled Compounds
Pathway:	Metabolic Enzyme/Protease; Others
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	Allopurinol-d_2 is deuterium labeled Allopurinol. Allopurinol is a potent xanthine oxidase inhibitor (IC50 values of 0.2 to 50 μM). Allopurinol can be used for the research of hyperuricemia and gout. Antileishmanial effect[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]. Pacher P, et al. Therapeutic effects of xanthine oxidase inhibitors: renaissance half a century after the discovery of allopurinol. Pharmacol Rev. 2006 Mar;58(1):87-114.

[3]. Pfaller MA, et al. Antileishmanial effect of allopurinol. Antimicrob Agents Chemother. 1974;5(5):469-472.

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