Allopurinol-d_2

Cat. No.: HY-B0219S

CAS No.: 916979-34-5

Molecular Formula: $C_5H_2D_2N_4O$

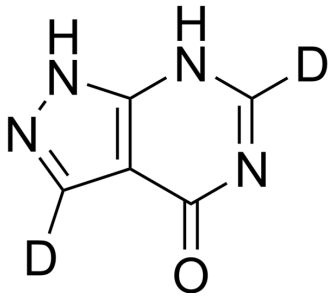
Molecular Weight: 138.12

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



SOLVENT & SOLUBILITY

In Vitro

H2O : 1 mg/mL (7.24 mM; ultrasonic and adjust pH to 11 with NaOH)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	7.2401 mL	36.2004 mL	72.4008 mL
5 mM	1.4480 mL	7.2401 mL	14.4802 mL
10 mM	---	---	---

Please refer to the solubility information to select the appropriate solvent.

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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