

Product Data Sheet

Product Name: Allopurinol-d2

Cat. No.: GC76023

Chemical Properties

Cas. No. 916979-34-5

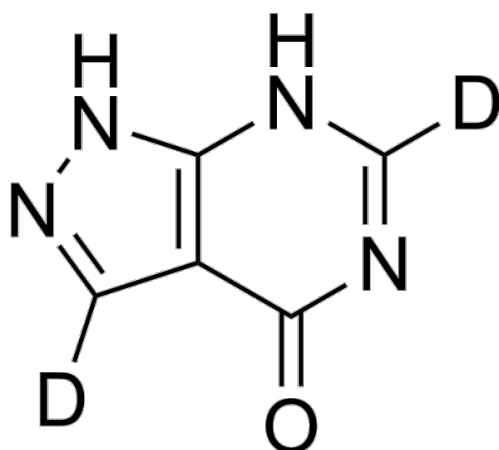
Formula $C_5H_2D_2N_4O$ M.Wt 138.12

Solubility H_2O : 1 mg/mL (7.24 mM; ultrasonic and adjust pH to 11 with NaOH) Storage $-20^{\circ}C$

General tips For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Allopurinol-d₂ 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].

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

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

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drugs^[1].

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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