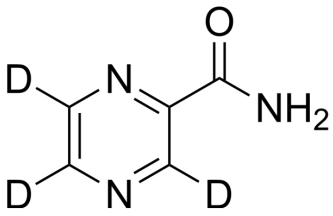
Pyrazinamide-d_3

Cat. No.:	HY-B0271S
CAS No.:	1432059-16-9
Molecular Formula:	$C_5H_2D_3N_3O$
Molecular Weight:	126.13
Target:	Bacterial; Autophagy; Antibiotic; Isotope-Labeled Compounds
Pathway:	Anti-infection; Autophagy; Others
Storage:	Powder -20°C 3 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	Pyrazinamide-d3 is deuterium labeled Pyrazinamide. Pyrazinamide (Pyrazinecarboxamide; Pyrazinoic acid amide) is a potent and orally active antitubercular antibiotic. Pyrazinamide is a proagent that is converted to the active form pyrazinoic acid (POA) by PZase/nicotinamidase encoded by the pncA gene in M. tuberculosis[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]. Y Zhang, et al. Role of acid pH and deficient efflux of pyrazinoic acid in unique susceptibility of Mycobacterium tuberculosis to pyrazinamide. J Bacteriol. 1999 Apr;181(7):2044-9.

[3]. Ying Zhang, et al. Mechanisms of Pyrazinamide Action and Resistance. Microbiol Spectr. 2014 Aug;2(4):MGM2-0023-2013.

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