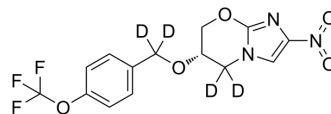


Pretomanid-d₄

Cat. No.:	HY-10844S		
CAS No.:	1346617-34-2		
Molecular Formula:	C ₁₄ H ₈ D ₄ F ₃ N ₃ O ₅		
Molecular Weight:	363.28		
Target:	Bacterial; Antibiotic; Isotope-Labeled Compounds		
Pathway:	Anti-infection; Others		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



BIOLOGICAL ACTIVITY

Description

Pretomanid-d₄ is the deuterium labeled Pretomanid. Pretomanid (PA-824) is an antibiotic used for the research of multi-drug-resistant tuberculosis affecting the lungs. Pretomanid exhibits a sub-micromolar MIC against *M. tuberculosis* (MTB). The MIC values of PA-824 against a panel of MTB pan-sensitive and Rifampin mono-resistant clinical isolates range from 0.015 to 0.25 µg/mL[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]. Stover CK, et al. A small-molecule nitroimidazopyran drug candidate for the treatment of tuberculosis. *Nature*. 2000 Jun 22;405(6789):962-6.
- [3]. Lenaerts AJ, et al. Preclinical testing of the nitroimidazopyran PA-824 for activity against *Mycobacterium tuberculosis* in a series of in vitro and in vivo models. *Antimicrob Agents Chemother*. 2005 Jun;49(6):2294-301.
- [4]. Manjunatha UH, et al. *Mycobacterium leprae* is naturally resistant to PA-824. *Antimicrob Agents Chemother*. 2006 Oct;50(10):3350-4.

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

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