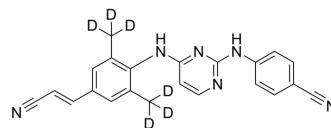


Rilpivirine-d₆

Cat. No.:	HY-10574S
CAS No.:	1312424-26-2
Molecular Formula:	C ₂₂ H ₁₂ D ₆ N ₆
Molecular Weight:	372.46
Target:	Reverse Transcriptase; HIV; Isotope-Labeled Compounds
Pathway:	Anti-infection; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Rilpivirine-d ₆ is the deuterium labeled Rilpivirine. Rilpivirine (R278474) is a potent and specific diarylpyrimidine (DAPY) non-nucleoside reverse transcriptase inhibitor (NNRTI). Rilpivirine has high antiviral activity against wild-type HIV (EC ₅₀ =0.4 nM) and mutant viruses (EC ₅₀ =0.1-2.0 nM). Rilpivirine has a high genetic barrier to resistance development of HIV[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]. Janssen PAJ, et al. In search of a novel anti-HIV drug: multidisciplinary coordination in the discovery of 4-[[4-[[4-[(1E)-2-cyanoethenyl]-2,6-dimethylphenyl]amino]-2-pyrimidinyl]amino]benzotrile (R278474, rilpivirine). *J Med Chem.* 2005 Mar 24;48(6):1901-9.
- [3]. Azijn H, et al. TMC278, a next-generation nonnucleoside reverse transcriptase inhibitor (NNRTI), active against wild-type and NNRTI-resistant HIV-1. *Antimicrob Agents Chemother.* 2010 Feb;54(2):718-27.

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

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