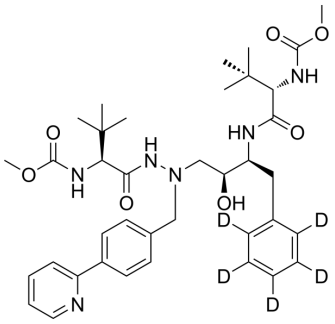
Atazanavir-d_5

Cat. No.:	HY-17367S3
CAS No.:	1132747-14-8
Molecular Formula:	$C_{38}H_{47}D_5N_6O_7$
Molecular Weight:	709.89
Target:	HIV Protease; P-glycoprotein; SARS-CoV; Cytochrome P450; HIV; Endogenous Metabolite; Isotope-Labeled Compounds
Pathway:	Anti-infection; Metabolic Enzyme/Protease; Membrane Transporter/Ion Channel; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Atazanavir-d_5 is the deuterium labeled Atazanavir. Atazanavir (BMS-232632), a highly selective HIV-1 protease inhibitor, is the first protease inhibitor approved for once-daily administration[1]. Atazanavir (BMS-232632) is a substrate and inhibitor of CYP3A4, and an inhibitor and inducer of P-glycoprotein (P-gp)[2]. Atazanavir is also a SARS-CoV 3CLpro inhibitor with an IC50 of 3.49 μM[3].
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]. Wood R. Atazanavir: its role in HIV treatment. Expert Rev Anti Infect Ther. 2008 Dec;6(6):785-96.

[3]. Havlir DV, et al. Atazanavir: new option for treatment of HIV infection. Clin Infect Dis. 2004 Jun 1;38(11):1599-604.

[4]. Qi Sun, et al. Bardoxolone and bardoxolone methyl, two Nrf2 activators in clinical trials, inhibit SARS-CoV-2 replication and its 3C-like protease. Signal Transduct Target Ther. 2021 May 29;6(1):212.

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