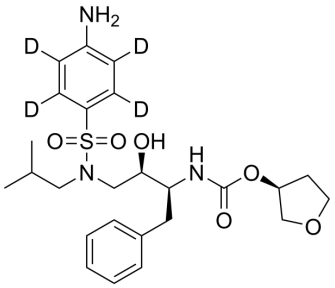
Amprenavir-d_4-1

Cat. No.:	HY-17430S1
CAS No.:	2738376-78-6
Molecular Formula:	$C_{25}H_{31}D_4N_3O_6S$
Molecular Weight:	509.65
Target:	HIV Protease; SARS-CoV; HIV; Isotope-Labeled Compounds
Pathway:	Anti-infection; Metabolic Enzyme/Protease; Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Amprenavir-d_4-1 is deuterium labeled Amprenavir. Amprenavir (VX-478) is a HIV protease inhibitor (Ki=0.6 nM) used to treat HIV infection. Amprenavir is also a SARS-CoV 3CLpro inhibitor with an IC50 of 1.09 μM.
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]. Esposito V, Verdina A, Manente L, Amprenavir inhibits the migration in human hepatocarcinoma cell and the growth of xenografts. J Cell Physiol. 2013 Mar;228(3):640-5.

[3]. Helsley RN, Sui Y, Ai N, Pregnane X Receptor Mediates Dyslipidemia Induced by the HIV Protease Inhibitor Amprenavir in Mice. Mol Pharmacol. 2013 Jun;83(6):1190-9.

[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.

[5]. Sadler BM, Stein DS. Clinical pharmacology and pharmacokinetics of amprenavir. Ann Pharmacother. 2002 Jan;36(1):102-18.

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