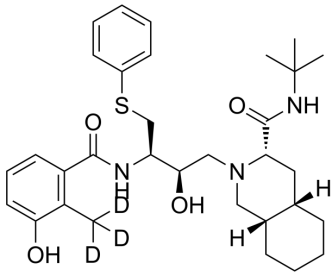
Nelfinavir-d_3

Cat. No.:	HY-15287S
CAS No.:	1217629-70-3
Molecular Formula:	$C_{32}H_{42}D_3N_3O_4S$
Molecular Weight:	570.8
Target:	HIV Protease; 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	Nelfinavir-d_3 (AG1341-d3) is the deuterium labeled Nelfinavir. Nelfinavir (AG-1341) is a potent and orally bioavailable HIV-1 protease inhibitor (Ki=2 nM) for HIV infection. Nelfinavir is a broad-spectrum, anticancer agent[1][2][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]. Mondal D, et al. Nelfinavir suppresses signaling and nitric oxide production by human aortic endothelial cells: protective effects of thiazolidinediones. Ochsner J. 2013 Spring;13(1):76-90.

[3]. Kaldor SW, et al. Nelfinavir mesylate (AG1343): a potent, orally bioavailable inhibitor of HIV-1 protease. J Med Chem. 1997 Nov 21;40(24):3979-85.

[4]. Gills JJ, et al. Nelfinavir, A lead HIV protease inhibitor, is a broad-spectrum, anticancer agent that inducesendoplasmic reticulum stress, autophagy, and apoptosis in vitro and in vivo. Clin Cancer Res. 2007 Sep 1;13(17):5183-94.

[5]. Bono C, et al. The human immunodeficiency virus-1 protease inhibitor nelfinavir impairs proteasome activity and inhibits the proliferation of multiple myeloma cells in vitro and in vivo. Haematologica. 2012;97(7):1101-1109.

[6]. 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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