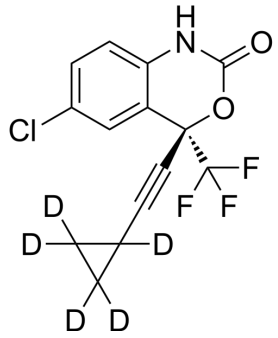
Efavirenz-d_5

Cat. No.:	HY-10572S
CAS No.:	1132642-95-5
Molecular Formula:	$C_{14}H_4D_5ClF_3NO_2$
Molecular Weight:	320.71
Target:	Reverse Transcriptase; HIV; Autophagy
Pathway:	Anti-infection; Autophagy
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Efavirenz-d_5 (DMP 266-d5) is the deuterium labeled Efavirenz. Efavirenz (DMP 266) is a potent inhibitor of the wild-type HIV-1 reverse transcriptase with a Ki of 2.93 nM and exhibits an IC95 of 1.5 nM for the inhibition of HIV-1 replicative spread in cell culture[1]. Efavirenz-d5 is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.
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]. Young SD, et al. L-743, 726 (DMP-266): a novel, highly potent nonnucleoside inhibitor of the human immunodeficiency virus type 1 reverse transcriptase. Antimicrob Agents Chemother. 1995 Dec;39(12):2602-5.

[3]. Held DM, et al. Differential susceptibility of HIV-1 reverse transcriptase to inhibition by RNA aptamers in enzymatic reactions monitoring specific steps during genome replication. J Biol Chem. 2006 Sep 1;281(35):25712-22.

[4]. Grobler JA, et al. HIV-1 reverse transcriptase plus-strand initiation exhibits preferential sensitivity to non-nucleoside reverse transcriptase inhibitors in vitro. J Biol Chem. 2007 Mar 16;282(11):8005-10.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA