## **Product** Data Sheet

## (Rac)-Tenofovir-d<sub>6</sub>

Cat. No.: HY-113904S

CAS No.: 1020719-94-1

Molecular Formula:  $C_9H_8D_6N_5O_4P$ Molecular Weight: 293.25

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Target: HIV; Reverse Transcriptase; HBV

Pathway: Anti-infection

Storage: -20°C, protect from light

\* In solvent: -80°C, 6 months; -20°C, 1 month (protect from light)

## **BIOLOGICAL ACTIVITY**

Description	(Rac)-Tenofovir- $d_6$ is a labelled racemic Tenofovir. Tenofovir (GS 1278) is a nucleotide reverse transcriptase inhibitor to treat HIV and chronic Hepatitis B (HBV)[1].
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 <sup>[1]</sup> .  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]. Murphy RA, et al. Establishment of HK-2 Cells as a Relevant Model to Study Tenofovir-Induced Cytotoxicity. Int J Mol Sci. 2017 Mar 1;18(3).
- [3]. Musumeci G, et al. M48U1 and Tenofovir combination synergistically inhibits HIV infection in activated PBMCs and human cervicovaginal histocultures. Sci Rep. 2017 Feb 1:7:41018.
- [4]. Wahl A, et al. Predicting HIV Pre-exposure Prophylaxis Efficacy for Women using a Preclinical Pharmacokinetic-Pharmacodynamic In Vivo Model. Sci Rep. 2017 Feb 1;7:41098.
- [5]. Menne S, Cote PJ, Korba BE, Antiviral effect of oral administration of tenofovir disoproxil fumarate in woodchucks with chronic woodchuck hepatitis virus infection. Antimicrob Agents Chemother. 2005 Jul;49(7):2720-8.

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

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