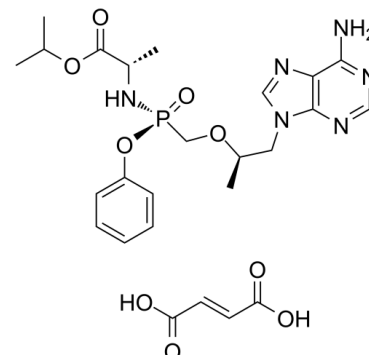


Data Sheet

Product Name:	Tenofovir alafenamide fumarate
Cat. No.:	CS-3367
CAS No.:	379270-38-9
Molecular Formula:	C ₂₅ H ₃₃ N ₆ O ₉ P
Molecular Weight:	592.54
Target:	HIV; Reverse Transcriptase
Pathway:	Anti-infection
Solubility:	H ₂ O : ≥ 25 mg/mL (42.19 mM); DMSO : ≥ 36 mg/mL (60.76 mM)



BIOLOGICAL ACTIVITY:

Tenofovir alafenamide fumarate (GS-7340 fumarate) is an investigational oral prodrug of Tenofovir. Tenofovir is a **HIV-1** nucleotide reverse transcriptase inhibitor. IC₅₀ & Target: HIV-1, NRTIs^[1] **In Vitro:** Tenofovir alafenamide fumarate (GS-7340 fumarate) antiviral activities are similar across all cell types, ranging from 5 to 7 nM, while the CC₅₀ varies from 4.7 to 42 μM for MT-4 and MT-2 cells, respectively. The antiviral activity of TAF is evaluated against a panel of HIV-1 and HIV-2 isolates, including HIV-1 group M subtypes A to G, as well as group N and O isolates. Overall, for the 29 primary HIV-1 isolates tested in PBMCs, TAF EC₅₀s range from 0.1 to 12 nM, with a mean EC₅₀ of 3.5 nM compared to a mean EC₅₀ of 11.8 nM for AZT, which is used as an internal control. For the HIV-2 isolates, the mean EC₅₀s are 1.8 nM for TAF and 6.4 nM for AZT^[2]. **In Vivo:** Tenofovir alafenamide fumarate (GS-7340 fumarate) is an amide prodrug of Tenofovir with good oral bioavailability and increases plasma stability compared to Tenofovir disoproxil fumarate (TDF)^[1].

References:

- [1]. Babusis D, et al. Mechanism for effective lymphoid cell and tissue loading following oral administration of nucleotide prodrug GS-7340. *Mol Pharm.* 2013 Feb 4;10(2):459-66.
- [2]. Ruane PJ, et al. Antiviral activity, safety, and pharmacokinetics/pharmacodynamics of tenofovir alafenamide as 10-day monotherapy in HIV-1-positive adults. *J Acquir Immune Defic Syndr.* 2013 Aug 1;63(4):449-55.

CAIndexNames:

L-Alanine, N-[(S)-[[[(1R)-2-(6-amino-9H-purin-9-yl)-1-methylethoxy]methyl]phenoxyphosphinyl]-, 1-methylethyl ester, (2E)-2-butenedioate (1:1)

SMILES:

NC1=NC=NC2=C1N=CN2C[C@@H](C)OC[P@](OC3=CC=CC=C3)(N[C@@H](C)C(OC(C)C)=O)=O.O=C(O)/C=C/C(O)=O

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

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA