Product Datasheet

Tenofovir alafenamide fumarate

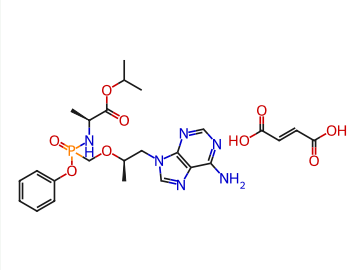
Catalog No. **BP-02069** · CAS **379270-38-9** · Form **free base** · Physical state **solid** · Color **white to off-white** · Version **1.0** · Revision **2026-11-12**

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Target	Research area
HIV; Reverse Transcriptase	**Infection; Cancer**

Molecular formula	$C_{25}H_{33}N_6O_9P$
Molecular weight	**592.5381**

STRUCTURE



DESCRIPTION

Tenofovir alafenamide fumarate (GS-7340 fumarate) is an investigational oral proagent of Tenofovir. Tenofovir is a HIV-1 nucleotide reverse transcriptase inhibitor.

BIOLOGICAL ACTIVITY

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 Tenofovir alafenamide fumarate 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, Tenofovir alafenamide fumarate 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 Tenofovir alafenamide fumarate, which is used as an internal control. For the HIV-2 isolates, the mean EC50s are 1.8 nM for Tenofovir alafenamide fumarate and 6.4 nM for AZT.

In Vivo

Tenofovir alafenamide fumarate (GS-7340 fumarate) is an amidate prodrug of Tenofovir with good oral bioavailability and increases plasma stability compared to Tenofovir disoproxil fumarate (TDF).

SOLUBILITY

Soluble in DMSO : ≥ 36 mg/mL

H2O : ≥ 25 mg/mL

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.