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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
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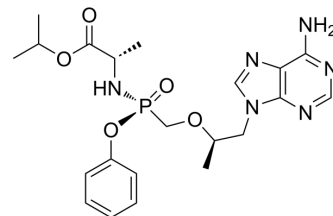
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Tenofovir alafenamide

Cat. No.:	HY-15232
CAS No.:	379270-37-8
Molecular Formula:	C ₂₁ H ₂₉ N ₆ O ₅ P
Molecular Weight:	476.47
Target:	HIV; Reverse Transcriptase
Pathway:	Anti-infection
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 31 mg/mL (65.06 mM)
 H₂O : 6.67 mg/mL (14.00 mM; Need ultrasonic)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass	1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM		2.0988 mL	10.4938 mL	20.9877 mL
	5 mM		0.4198 mL	2.0988 mL	4.1975 mL
	10 mM		0.2099 mL	1.0494 mL	2.0988 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: PBS
Solubility: 40 mg/mL (83.95 mM); Clear solution; Need ultrasonic
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
Solubility: ≥ 2.08 mg/mL (4.37 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
Solubility: ≥ 2.08 mg/mL (4.37 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil
Solubility: ≥ 2.08 mg/mL (4.37 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

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

IC ₅₀ & Target	HIV-1	HIV-2
In Vitro	Tenofovir alafenamide (GS-7340) 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]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	Tenofovir alafenamide (GS-7340) hemifumarate is an amide prodrug of Tenofovir with good oral bioavailability and increases plasma stability compared to Tenofovir disoproxil fumarate (TDF)^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

CUSTOMER VALIDATION

- J Gastroenterol. 2020 Apr;55(4):441-452
- Pharmaceutics. 2021, 13(10), 1656.
- J Antimicrob Chemother. 2017 Jun 1;72(6):1731-1740.
- Antimicrob Agents Chemother. 2019 Mar 27;63(4). pii: e02143-18.
- Research Square Print. 2023 Mar 20.

See more customer validations on www.MedChemExpress.com

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.

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

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