

PRODUCT INFORMATION

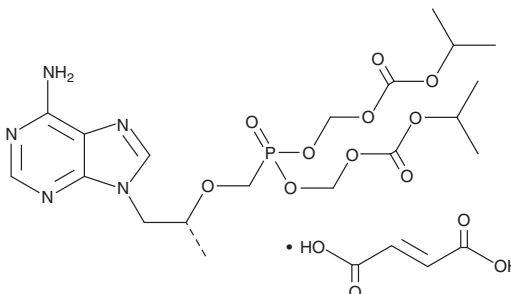


Tenofovir Disoproxil (fumarate)

Item No. 16922

CAS Registry No.: 202138-50-9
Formal Name: (5-[[[(1R)-2-(6-amino-9H-purin-9-yl)-1-methylethoxy]methyl]-2,4,6,8-tetraoxa-5-phosphanonedioic acid, 1,9-bis(1-methylethyl) ester 5-oxide, (2E)-2-butenedioate

Synonym: Bis(POC)-PMPA
MF: C₁₉H₃₀N₅O₁₀P • C₄H₄O₄
FW: 635.5
Purity: ≥98%
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 209, 260 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Tenofovir disoproxil (fumarate) is supplied as a crystalline solid. A stock solution may be made by dissolving the tenofovir disoproxil (fumarate) in the solvent of choice. Tenofovir disoproxil (fumarate) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of tenofovir disoproxil (fumarate) in these solvents is approximately 5, 14, and 16 mg/ml, respectively.

Tenofovir disoproxil (fumarate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, tenofovir disoproxil (fumarate) should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Tenofovir disoproxil (fumarate) has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Tenofovir disoproxil is a prodrug of the acyclic nucleoside phosphonate, tenofovir (Item No. 13874).^{1,2} Tenofovir is converted by cellular enzymes to tenofovir diphosphate, an obligate chain terminator that inhibits the activity of HIV reverse transcriptase and hepatitis B virus polymerase.^{3,4} Due to its rapid intracellular uptake, the anti-HIV activity of tenofovir disoproxil is reportedly >100-fold greater than that of the negatively charged tenofovir in a T cell line and primary blood lymphocytes.²

References

1. De Clercq, E. *Clin. Microbiol. Rev.* **16**(4), 569-596 (2003).
2. Robbins, B.L., Srinivas, R.V., Kim, C., et al. *Antimicrob. Agents Chemother.* **42**(3), 612-617 (1998).
3. Balzarini, J., Vahlenkamp, T., Egberink, H., et al. *Antimicrob. Agents Chemother.* **41**(3), 611-616 (1997).
4. Balzarini, J., Holy, A., Jindrich, J., et al. *Antimicrob. Agents Chemother.* **37**(2), 332-338 (1993).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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