

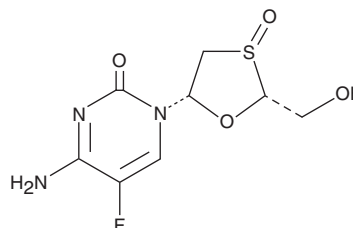
PRODUCT INFORMATION



Emtricitabine S-oxide

Item No. 26654

CAS Registry No.: 152128-77-3
Formal Name: 4-amino-5-fluoro-1-[(2R,5S)-2-(hydroxymethyl)-3-oxido-1,3-oxathiolan-5-yl]-2(1H)-pyrimidinone
MF: C₈H₁₀FN₃O₄S
FW: 263.2
Purity: ≥98% (mixture of diastereomers)
Supplied as: A 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

Emtricitabine S-oxide is supplied as a solid. A stock solution may be made by dissolving the emtricitabine S-oxide in the solvent of choice, which should be purged with an inert gas. Emtricitabine S-oxide is slightly soluble in water (warmed).

Emtricitabine S-oxide is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Emtricitabine S-oxide is a potential impurity found in commercial preparations of emtricitabine.¹ Emtricitabine (Item No. 16879) is a nucleoside analog and an inhibitor of HIV-1 and hepatitis B reverse transcriptase with antiviral activity.² It inhibits replication of HIV-1 (EC₅₀s = 10-20 nM) and hepatitis B (EC₅₀s = 10-40 nM) in various cell lines.³ Emtricitabine inhibits duck hepatitis B viral DNA synthesis when administered pre- and post-viral inoculation in primary duck hepatocytes.⁴ *In vivo*, emtricitabine (3-30 mg/kg) reduces viremia and hepatic woodchuck hepatitis virus (WHV) replication in a dose-dependent manner in a woodchuck model of chronic WHV infection.⁵ Formulations containing emtricitabine have been used in the treatment of HIV infection.

References

1. Mali, A. and More, U. RP-HPLC method for simultaneous estimation of impurities from emtricitabine and tenofovir disoproxil fumarate tablet. *Int. J. Pharm. Sci. Res.* **7(4)**, 1662-1669 (2016).
2. Nelson, M. and Schiavone, M. Emtricitabine (FTC) for the treatment of HIV infection. *Int. J. Clin. Pract.* **58(5)**, 504-510 (2004).
3. Darque, A., Valette, G., Rousseau, F., *et al.* Quantitation of intracellular triphosphate of emtricitabine in peripheral blood mononuclear cells from human immunodeficiency virus-infected patients. *Antimicrob. Agents Chemother.* **43(9)**, 2245-2250 (1999).
4. Seignères, B., Martin, P., Werle, B., *et al.* Effects of pyrimidine and purine analog combinations in the duck hepatitis B virus infection model. *Antimicrob. Agents Chemother.* **47(6)**, 1842-1852 (2003).
5. Korba, B.E., Schinazi, R.F., Cote, P., *et al.* Effect of oral administration of emtricitabine on woodchuck hepatitis virus replication in chronically infected woodchucks. *Antimicrob. Agents Chemother.* **44(6)**, 1757-1760 (2000).

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.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 11/29/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM