

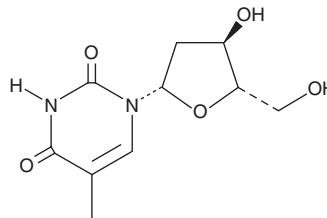
PRODUCT INFORMATION



Telbivudine

Item No. 21453

CAS Registry No.: 3424-98-4
Formal Name: 1-(2-deoxy-β-L-erythro-pentofuranosyl)-5-methyl-2,4(1H,3H)-pyrimidinedione
Synonyms: 2'-deoxy-L-Thymidine, L-Deoxythymidine, NV 02B, β-L-Thymidine
MF: C₁₀H₁₄N₂O₅
FW: 242.2
Purity: ≥98%
UV/Vis.: λ_{max}: 267 nm
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

Telbivudine is supplied as a solid. A stock solution may be made by dissolving the telbivudine in the solvent of choice, which should be purged with an inert gas. Telbivudine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of telbivudine in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of telbivudine can be prepared by directly dissolving the solid in aqueous buffers. The solubility of telbivudine in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Telbivudine is a β-L-nucleoside analog of thymidine (Item No. 20519) that has antiviral activity.^{1,2} It is active against hepatitis B virus (HBV) in 2.2.15 cells (EC₅₀ = 0.19 μM).² Telbivudine is selective for HBV over HIV-1, herpes simplex virus-1 (HSV-1), HSV-2, and influenza A and B (EC₅₀s = >100 μM). It reduces serum viral load in a woodchuck model of chronic HBV infection in a dose-dependent manner. Formulations containing telbivudine have been used in the treatment of chronic HBV infection.

References

1. Han, S.-H.B. Telbivudine: A new nucleoside analogue for the treatment of chronic hepatitis B. *Expert Opin. Investig. Drugs* **14**(4), 511-519 (2005).
2. Bryant, M.L., Bridges, E.G., Placidi, L., et al. Antiviral β-L-nucleosides specific for hepatitis B virus infection. *Antimicrob. Agents Chemother.* **45**(1), 229-235 (2001).

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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