PRODUCT INFORMATION

Lamivudine
Item No. 18514

CAS Registry No.: 134678-17-4
Formal Name: 4-amino-1-[(2R,5S)-2-(hydroxymethyl)1,3- oxathiolan-5-yl]-2(1H)-pyrimidinone
Synonyms: (-)-BCH 189, Epivir™, Epivir-HBV™, 3TC, 2',3'-dideoxy-3'-Thiacytidine
MF: C₈H₁₁N₃O₃S
FW: 229.3
Purity: ≥98%
UV/Vis.: λmax: 203, 233, 271 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years

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

Laboratory Procedures

Lamivudine is supplied as a crystalline solid. A stock solution may be made by dissolving the lamivudine in the solvent of choice. Lamivudine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of lamivudine in ethanol is approximately 0.5 mg/ml and approximately 20 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 lamivudine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of lamivudine in PBS, pH 7.2, is approximately 3 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Lamivudine is a cytidine analog that inhibits the reverse transcriptases of HIV1 (IC₅₀ = 45 nM), HIV2, and hepatitis B.1,2 It was one of the first approved nucleoside analog reverse transcriptase inhibitors used to treat viral infections. Following prolonged administration, the efficacy of lamivudine is associated with drug resistance, which may be improved through combination treatments.3,4

References