

# PRODUCT INFORMATION



## Adefovir dipivoxil

Item No. 28373

**CAS Registry No.:** 142340-99-6  
**Formal Name:** 2,2-dimethyl-propanoic acid, 1,1'-[[[2-(6-amino-9H-purin-9-yl)ethoxy)methyl]phosphinylidene]bis(oxymethylene)] ester

**Synonym:** GS 0840

**MF:** C<sub>20</sub>H<sub>32</sub>N<sub>5</sub>O<sub>8</sub>P

**FW:** 501.5

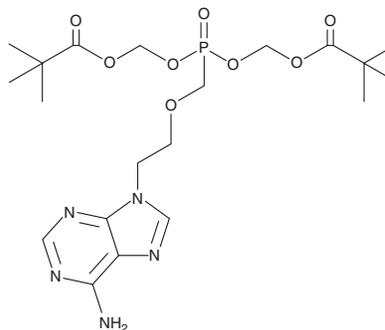
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 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

Adefovir dipivoxil is supplied as a crystalline solid. A stock solution may be made by dissolving the adefovir dipivoxil in the solvent of choice, which should be purged with an inert gas. Adefovir dipivoxil is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of adefovir dipivoxil in these solvents is approximately 30 mg/ml.

### Description

Adefovir dipivoxil is a prodrug form of the antiviral nucleoside analog adefovir (Item No. 18650).<sup>1</sup> Adefovir dipivoxil inhibits hepatitis B virus (HBV) DNA synthesis in HepG2 2.2.15 cells infected with HBV (EC<sub>50</sub> = 0.517 μM).<sup>2</sup> It is cytotoxic to HepG2 2.2.15 cells with a 50% cytotoxicity concentration (CC<sub>50</sub>) value of 540 μM. Adefovir dipivoxil inhibits HBV replication in the liver of HBV transgenic mice (ED<sub>50</sub> = 0.2 μmol/kg per day).<sup>3</sup> Formulations containing adefovir dipivoxil have been used in the treatment of chronic HBV infection.

### References

1. Liu, L.J., Wang, J.H., Du, S.C., *et al.* rtE218G, a novel hepatitis B virus mutation with resistance to adefovir dipivoxil in patients with chronic hepatitis B. *J. Viral Hepat.* **17(Suppl. 1)**, 66-72 (2010).
2. Fu, X., Jiang, S., Li, C., *et al.* Design and synthesis of novel bis(L-amino acid) ester prodrugs of 9-[2-(phosphonomethoxy)ethyl]adenine (PMEA) with improved anti-HBV activity. *Bioorg. Med. Chem. Lett.* **17(2)**, 465-470 (2007).
3. Morrey, J.D., Korba, B.E., Beadle, J.R., *et al.* Alkoxyalkyl esters of 9-(s)-(3-hydroxy-2-phosphonomethoxypropyl) adenine are potent and selective inhibitors of hepatitis B virus (HBV) replication in vitro and in HBV transgenic mice in vivo. *Antimicrob. Agents Chemother.* **53(7)**, 2865-2870 (2009).

#### 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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