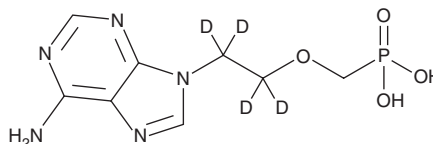


PRODUCT INFORMATION



Adefovir-d₄ Item No. 31315

CAS Registry No.: 1190021-70-5
Formal Name: P-[[2-(6-amino-9H-purin-9-yl)ethoxy-1,1,2,2-d₄]methyl]-phosphonic acid
Synonym: PMEAd₄
MF: C₈H₈D₄N₅O₄P
FW: 277.2
Chemical Purity: ≥98% (Adefovir)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
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

Adefovir-d₄ is intended for use as an internal standard for the quantification of adefovir (Item No. 18650) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Adefovir-d₄ is supplied as a solid. A stock solution may be made by dissolving the adefovir-d₄ in the solvent of choice, which should be purged with an inert gas. Adefovir-d₄ is soluble in the organic solvent DMSO.

Description

Adefovir is an active metabolite of the antiviral nucleoside analog adefovir dipivoxil (Item No. 28373).¹ Adefovir is formed from adefovir dipivoxil by gastrointestinal carboxylesterase 2 (CES2).² It inhibits cytopathogenicity induced by herpes simplex virus 1 (HSV-1) and HSV-2 (EC₅₀ = 7 µg/ml for both in E₆SM cells), HIV-1 and HIV-2 (EC₅₀s = 1.8 and 2.5 µg/ml, respectively, in CEM cells), and varicella zoster virus (VZV; EC₅₀ = 10 µg/ml in human embryonic lung fibroblasts).³ Adefovir (50 mg/kg, p.o.) reduces increases in lymph node viral DNA and serum IgG levels in a mouse model of AIDS induced by infection with the retroviral complex LP-BM5.⁴ It also inhibits tumor growth induced by Moloney sarcoma virus (MSV) infection in mice at the same dose.⁵

References

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2. Laizure, S.C., Herring, V., Hu, Z., et al. *Pharmacotherapy* **33**(2), 210-222 (2013).
3. Holý, A., Votruba, I., Masojídková, M., et al. *J. Med. Chem.* **45**(9), 1918-1929 (2002).
4. Rossi, L., Dominici, S., Serafini, S., et al. *J. Antimicrob. Chemother.* **50**(3), 365-374 (2002).
5. Naesens, L., Balzarini, J., Bischofberger, N., et al. *Antimicrob. Agents Chemother.* **40**(1), 22-28 (1996).

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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