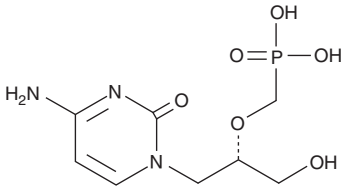
PRODUCT INFORMATION

Cidofovir

Item No. 13113

CAS Registry No.: 113852-37-2
Formal Name: P-[[(1S)-2-(4-amino-2-oxo-1(2H)-pyrimidinyl)-1-(hydroxymethyl)ethoxy]methyl]-phosphonic acid
Synonyms: GS-0504, (S)-HPMPC, (S)-1-(3-hydroxy-2-phosphonylmethoxypropyl)cytosine
MF: $C_8H_{14}N_3O_6P$
FW: 279.2
Purity: ≥95%
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

Cidofovir is supplied as a crystalline solid. Aqueous solutions of cidofovir can be prepared by directly dissolving the cidofovir in aqueous buffers. The solubility of cidofovir in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Cidofovir is an acyclic nucleoside phosphonate antiviral agent and an active metabolite of brincidofovir (Item No. 35062).[1] It is formed from brincidofovir in MRC-5 human lung fibroblasts. Cidofovir inhibits CMV DNA synthesis in a cell-free assay, as well as replication of two CMV strains in plaque formation assays (IC_{50}s = 0.1 and 0.07 µg/ml for Davis and AD-169 strains, respectively).[2,3] It decreases mortality in mouse models of cowpox or vaccinia virus infections when administered at a dose of 15 mg/kg.[4] Formulations containing cidofovir have been used in the treatment of CMV retinitis in patients with AIDS.

References

1. Aldern, K.A., Ciesla, S.L., Winegarden, K.L., *et al.* Increased antiviral activity of 1-*O*-hexadecyloxypropyl-[2-^{14}C]cidofovir in MRC-5 human lung fibroblasts is explained by unique cellular uptake and metabolism. *Mol. Pharmacol.* **63(3)**, 678-681 (2003).
2. Xiong, X., Smith, J.L., and Chen, M.S. Effect of incorporation of cidofovir into DNA by human cytomegalovirus DNA polymerase on DNA elongation. *Antimicrob. Agents Chemother.* **41(3)**, 594-599 (1997).
3. Snoeck, R., Sakuma, T., De Clercq, E., *et al.* (S)-1-(3-hydroxy-2-phosphonylmethoxypropyl)cytosine, a potent and selective inhibitor of human cytomegalovirus replication. *Antimicrob. Agents Chemother.* **32(12)**, 1839-1844 (1988).
4. Quenelle, D.C., Buller, R.M.L., Parker, S., *et al.* Efficacy of delayed treatment with ST-246 given orally against systemic orthopoxvirus infections in mice. *Antimicrob. Agents Chemother.* **51(2)**, 689-695 (2007).

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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