

PRODUCT INFORMATION



2',3'-Dideoxycytidine-5'-O-triphosphate (sodium salt)

Item No. 38374

Formal Name: 2',3'-dideoxy-cytidine
5'-(tetrahydrogen triphosphate),
tetrasodium salt

Synonyms: ddCTP,
Dideoxycytidine 5'-triphosphate,
Zalcitabine 5'-triphosphate

MF: C₉H₁₂N₃O₁₂P₃ • 4Na

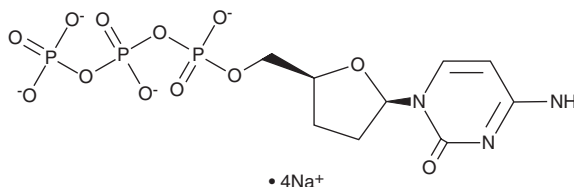
FW: 539.1

Purity: ≥95%

Supplied as: A solution in water

Storage: -80°C

Stability: ≥2 years



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

Description

2',3'-Dideoxycytidine-5'-O-triphosphate is an active metabolite of the reverse transcriptase inhibitor zalcitabine (Item No. 16019).¹ It is an inhibitor of DNA polymerases β and γ (K_i s = 1.32 and 0.034 μ M, respectively, for the human enzymes).² 2',3'-Dideoxycytidine-5'-O-triphosphate (1 mM) inhibits HIV-1 replication in isolated human erythrocytes.³ Intraperitoneal administration of 2',3'-dideoxycytidine-5'-O-triphosphate-loaded erythrocytes reduces spleen and lymph node weight, limits increases in IgG levels, and decreases mediastinal lymph node swelling in a mouse model of LP-BM5 leukemic retrovirus infection-induced immunodeficiency.³

References

1. Anderson, P.L., Nakuda, T.K., and Lichtenstein, K.A. The cellular pharmacology of nucleoside- and nucleotide-analogue reverse-transcriptase inhibitors and its relationship to clinical toxicities. *Clin. Infect. Dis.* **38(5)**, 743-753 (2004).
2. Cherrington, J.M., Allen, S.J., McKee, B.H., *et al.* Kinetic analysis of the interaction between the diphosphate of (S)-1-(3-hydroxy-2-phosphonylmethoxypropyl)cytosine, ddCTP, AZTTP, and FIAUTP with human DNA polymerases β and γ . *Biochem. Pharmacol.* **48(10)**, 1986-1988 (1994).
3. Magnani, M., Rossi, L., Brandi, G., *et al.* Targeting antiretroviral nucleoside analogues in phosphorylated form to macrophages: *In vitro* and *in vivo* studies. *Proc. Natl. Acad. Sci. USA* **89(14)**, 6477-6481 (1992).

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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