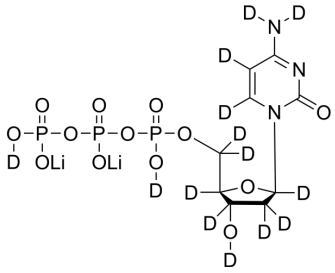
Deoxycytidine triphosphate-d_{14} dilithium

Cat. No.:	HY-101400S
CAS No.:	2687960-70-7
Molecular Formula:	$C_9D_{14}Li_2N_3O_{13}P_3$
Molecular Weight:	493.11
Target:	Isotope-Labeled Compounds; Nucleoside Antimetabolite/Analog; DNA/RNA Synthesis; Endogenous Metabolite
Pathway:	Others; Cell Cycle/DNA Damage; Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Deoxycytidine triphosphate-d_{14} (dCTP-d_{14} dilithium; 2′-Deoxycytidine-5′-triphosphate-d_{14}) dilithium is deuterium labeled Deoxycytidine triphosphate (HY-101400). Deoxycytidine triphosphate (dCTP) is a nucleoside triphosphate that can be used for DNA synthesis. Deoxycytidine triphosphate has many applications, such as real-time PCR, cDNA synthesis, and DNA sequencing.
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.

[2]. M H Tattersall, et al. Deoxyribonucleoside triphosphates in human cells: changes in disease and following exposure to drugs. Eur J Clin Invest. 1975 Apr;5(2):191-202.

[3]. A W Harris, et al. Effect of thymidine on the sensitivity of cultured mouse tumor cells to 1-beta-D-arabinofuranosylcytosine. Cancer Res. 1979 Feb;39(2 Pt 1):538-41.

[4]. B A Bladergroen, et al. CTP:phosphoethanolamine cytidylyltransferase. Biochim Biophys Acta. 1997 Sep 4;1348(1-2):91-9.

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