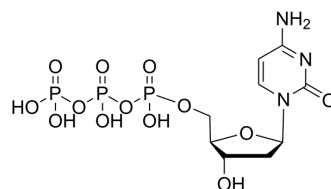


Deoxycytidine triphosphate

Cat. No.:	HY-101400		
CAS No.:	2056-98-6		
Molecular Formula:	C ₉ H ₁₆ N ₃ O ₁₃ P ₃		
Molecular Weight:	467.16		
Target:	Nucleoside Antimetabolite/Analog; DNA/RNA Synthesis; Endogenous Metabolite		
Pathway:	Cell Cycle/DNA Damage; Metabolic Enzyme/Protease		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	2 years
		-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

H₂O : 50 mg/mL (107.03 mM; Need ultrasonic)

Concentration	Solvent	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	2.1406 mL	10.7030 mL	21.4059 mL
	5 mM	0.4281 mL	2.1406 mL	4.2812 mL
	10 mM	0.2141 mL	1.0703 mL	2.1406 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

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^{[1][2][3]}.

IC₅₀ & Target

Human Endogenous Metabolite

In Vitro

Assays of thirteen cell lines, derived from mouse lymphomas, myelomas, myeloid tumors, and a mastocytoma, for sensitivity to growth inhibition by 1-β-D-arabinofuranosylcytosine (ara-C) revealed a spectrum between the most and least sensitive which differed 100-fold from each other. An inverse correlation between sensitivity and cellular Deoxycytidine triphosphate (2'-Deoxycytidine-5'-triphosphate, dCTP) content is found, and this suggested that sensitivity of cells might be increased if the dCTP content was lowered during cell exposure to ara-C^[1].
Deoxycytidine triphosphate trisodium salt is a phosphoethanolamine cytidyltransferase substrate^[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Mol Med (Berl). 2019 Aug;97(8):1183-1193.

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REFERENCES

- [1]. 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.
 - [2]. 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.
 - [3]. B A Bladergroen, et al. CTP:phosphoethanolamine cytidylyltransferase. Biochim Biophys Acta. 1997 Sep 4;1348(1-2):91-9.
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Caution: Product has not been fully validated for medical applications. For research use only.

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