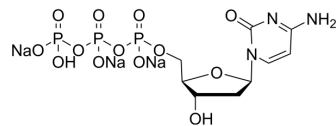


Deoxycytidine triphosphate trisodium salt

| | |
|---------------------------|--|
| Cat. No.: | HY-101400A |
| CAS No.: | 109909-44-6 |
| Molecular Formula: | C ₉ H ₁₃ N ₃ Na ₃ O ₁₃ P ₃ |
| Molecular Weight: | 533.1 |
| Target: | Nucleoside Antimetabolite/Analog; DNA/RNA Synthesis; Endogenous Metabolite |
| Pathway: | Cell Cycle/DNA Damage; Metabolic Enzyme/Protease |
| Storage: | Solution, -20°C, 2 years |



SOLVENT & SOLUBILITY

| | |
|-----------------|---|
| In Vitro | H ₂ O : 250 mg/mL (468.96 mM; Need ultrasonic) DMSO : < 1 mg/mL (ultrasonic;warming;heat to 80°C) (insoluble or slightly soluble) |
| In Vivo | 1. Add each solvent one by one: PBS Solubility: 100 mg/mL (187.58 mM); Clear solution; Need ultrasonic |

BIOLOGICAL ACTIVITY

| | |
|-------------------------------------|---|
| Description | Deoxycytidine triphosphate trisodium salt (dCTP trisodium salt) is a nucleoside triphosphate that can be used for DNA synthesis. Deoxycytidine triphosphate trisodium salt 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]. 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.
- [2]. B A Bladergroen, et al. CTP:phosphoethanolamine cytidyltransferase. *Biochim Biophys Acta.* 1997 Sep 4;1348(1-2):91-9.
- [3]. 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.
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Caution: Product has not been fully validated for medical applications. For research use only.

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