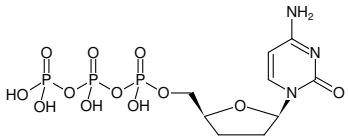
DATA SHEET

Jena Bioscience

ddCTP - high concentration

2',3'-Dideoxycytidine-5'-triphosphate, Trilithium salt

Cat. No.	Amount
NU-272S	10 µl (1 µmol)
NU-272L	5 x 10 µl (5 µmol)



Structural formula of ddCTP - high concentration

For general laboratory use.

Shipping: shipped on gel packs

Storage Conditions: store at -20 °C

Short term exposure (up to 1 week cumulative) to ambient temperature possible.

Shelf Life: 12 months after date of delivery

Molecular Formula: $C_9H_{16}N_3O_{12}P_3$ (free acid)

Molecular Weight: 451.16 g/mol (free acid)

Exact Mass: 450.99 g/mol (free acid)

CAS#: 66004-77-1

Purity: ≥ 98 % (HPLC)

Form: solution in water

Color: colorless to slightly yellow

Concentration: 100 mM - 110 mM

pH: 7.5 ±0.5

Spectroscopic Properties: λ_{max} 271 nm, ε 8.9 L mmol^{-1} cm^{-1} (Tris-HCl pH 7.5)

Applications:
SNP: multiplexing by minisequencing[1]

Multiplexed detection of alternatively spliced transcripts[2]

Effect on reverse transcriptase of HIV-1[3]

Molecular dynamic calculations of DNA-polymerase beta-ddCTP complex[4]

Crystal structure with DNA- polymerase-I[5]

Selected References:

[1] Gronlund *et al.* (2011) Direct detection of single-nucleotide polymorphisms in bacterial DNA by SNPtrap. *Preparative Biochemistry and Biotechnology* **41**:166.

[2] Milani *et al.* (2006) Detection of alternatively spliced transcripts in leukemia cell lines by minisequencing on microarrays. *Clinica Chemistry (Washington)* **52**:202.

[3] Anderson (2001) The molecular basis of inhibition and toxicity of modified cytosine analogues targetting HIV-1 reverse transcriptase. *Antiviral Chemistry and Chemotherapy* **12**:13.

[4] Rittenhouse *et al.* (2003) Characterization of the active site of DNA polymerase beta by molecular dynamics and quantum chemical calculation. *Proteins: Structure, Function and Genetics* **53**:667.

[5] Li *et al.* (2001) Crystal structures of ddATP-, ddTTP-, ddCTP-, and ddGTP-trapped ternary complex of Klentaq1: insights into nucleotide incorporation selectivity. *Protein Science* **10**:1225.

Sanger *et al.* (1977) DNA sequencing with chain-terminating inhibitors. *Proc. Natl. Acad. Sci. USA* **74**:5463.