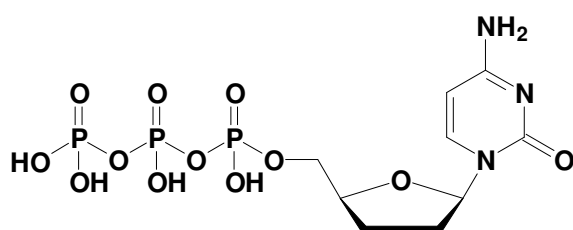


ddCTP 10 mM

Cat. No.	Amount
NU-1016S	200 μ l (2 μ mol)
NU-1016L	1 ml (10 μ mol)



For *in vitro* use only

Quality guaranteed for 12 months

Store at -20°C, short term (up to one week) exposure to ambient temperature possible

Quality control

The dideoxynucleotide solution has a purity of >99% and is functionally tested by chain termination sequencing reactions.

Description

Clear aqueous solution of ultrapure ddCTP at a concentration of 10-11 mM and pH 8.0 +/-0.2.

ddCTP

2',3'-Dideoxy-cytidine-5'-triphosphate, sodium salt

Molecular formula: C₉H₁₆N₃O₁₂P₃ (free acid)

Molecular weight: 451.16 (free acid)

Spectroscopic Properties: λ_{\max} 271 nm;
 ϵ 8900

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 Chimica (Washington)* **52**:202.

[3] Anderson (2001) The molecular basis of inhibition and toxicity of modified cytosine analogues targeting 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