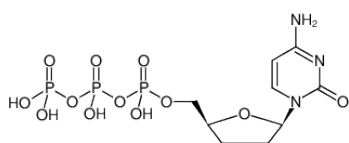




## ddCTP - high concentration

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

Cat. No.	Amount
NU-292S	10 µl (100 mM)
NU-292L	5 x 10 µl (100 mM)



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<sub>9</sub>H<sub>16</sub>N<sub>3</sub>O<sub>12</sub>P<sub>3</sub> (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<sub>max</sub> 271 nm, ε 8.9 L mmol<sup>-1</sup> cm<sup>-1</sup> (Tris-HCl pH 7.5)

### Applications:

SNP: multiplexing by minisequencing<sup>[1]</sup>

Multiplexed detection of alternatively spliced transcripts<sup>[2]</sup>

Effect on reverse transcriptase of HIV-1<sup>[3]</sup>

Molecular dynamic calculations of DNA-polymerase beta-ddCTP complex<sup>[4]</sup>

Crystal structure with DNA- polymerase-<sup>[5]</sup>

### 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 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.