

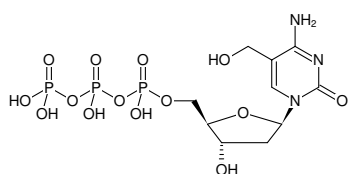


5-Hydroxymethyl-dCTP

hmdCTP, 5hmdCTP

5-Hydroxymethyl-2'-deoxycytidine-5'-triphosphate, Sodium salt

Cat. No.	Amount
NU-932S	100 µl (100 mM)
NU-932L	5 x 100 µl (100 mM)



Structural formula of 5-Hydroxymethyl-dCTP

For research use only!

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: C₁₀H₁₈N₃O₁₄P₃ (free acid)

Molecular Weight: 497.18 g/mol (free acid)

Exact Mass: 497.00 g/mol (free acid)

CAS#: 7226-77-9

Purity: ≥ 95 % (HPLC), < 0.5% dCTP (HPLC)

Form: solution in water

Color: colorless to slightly yellow

Concentration: 100 mM - 110 mM

pH: 7.5 ± 0.5

Spectroscopic Properties: λ_{max} 275 nm, ε 7.8 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)

Applications:

Incorporation into DNA by
- PCR with *Taq* polymerase ^{in-house data, [1-6]}

Description:

5-Hydroxymethylated DNA probes can be used as sequencing control ^[1-5] or for pull-down of 5-hmC binding proteins from cellular lysate ^[6].

Selected References:

- [1] Booth *et al.* (2014) Quantitative sequencing of 5-formylcytosine in DNA at single-base resolution. *Nat. Chem.* **6** (5):435.
- [2] Booth *et al.* (2013) Oxidative bisulfite sequencing of 5-methylcytosine and 5-hydroxymethylcytosine. *Nat. Protoc.* **8** (10):1841.
- [3] Yu *et al.* (2012) Tet-assisted bisulfite sequencing of 5-hydroxymethylcytosine. *Nat. Protoc.* **7** (12):2159.
- [4] Szwagierczak *et al.* (2011) Characterization of PvuRts1 endonuclease as a tool to investigate genomic 5-hydroxymethylcytosine. *Nucl. Acids Res.* **39**(12):5149.
- [5] Szwagierczak *et al.* (2010) Sensitive enzymatic quantification of 5-hydroxymethylcytosine in genomic DNA. *Nucl. Acids Res.* **38**(19):e181.
- [6] Lafaye *et al.* (2014) DNA binding of the p21 repressor ZBTB2 is inhibited by cytosine hydroxymethylation. *Biochem. Biophys. Res. Commun.* **446**:341.