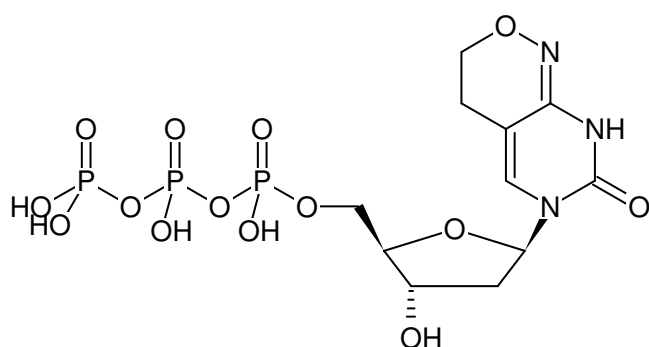


**dPTP**

6H,8H-3,4-Dihydro-pyrimido(4,5-c)(1,2)oxazin-7-one-8-β-D-2'-deoxy-ribofuranoside-5'-triphosphate, Sodium salt

Cat. No.	Amount
NU-1119S	30 µl (10 mM)
NU-1119L	5 x 30 µl (10 mM)



Structural formula of dPTP

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: C₁₁H₁₈N₃O₁₄P₃ (free acid)

Molecular Weight: 509.19 g/mol (free acid)

Exact Mass: 509.00 g/mol (free acid)

CAS#: 173964-83-5

Purity: ≥ 95 % (HPLC)

Form: solution in water

Color: colorless to slightly yellow

Concentration: 10 mM - 11 mM

pH: 7.5 ± 0.5

Spectroscopic Properties: λ_{max} 294 nm, ε 6.7 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)

Applications:

Mutagenesis via reverse transcription^[1]

Interaction with DNA polymerases alpha and I^[2]

Incorporation rate by terminal transferase^[3]

Generation of a library of mutants^[4]

Selected References:

[1] Petrie *et al.* (2010) Deep sequencing analysis of mutations resulting from the incorporation of dNTP analogs. *Nucleic Acids Res.* **38** (22):8095.

[2] Patro *et al.* (2009) Interaction of human DNA polymerases alpha and DNA polymerase I from *Bacillus stearothermophilus* with hypoxanthine and 8-oxoguanine nucleotides. *Biochemistry* **48**:8271.

[3] Wong *et al.* (2008) Transversion-enriched sequence saturation mutagenesis (SeSaM-Tv+): a random mutagenesis method with consecutive nucleotide exchanges that complement the bias of error-prone PCR. *Biotechnology J.* **3**:74.

[4] Cain *et al.* (2001) Selection of novel ligands from a whole -molecular randomly mutated C5a library. *Protein Engineering* **14**:189.

Huber *et al.* (2010) Amino acid residues important for folding of thioredoxin are revealed only by study of the physiologically relevant reduced form of the protein. *Biochemistry* **49** (41):8922.

Cummins *et al.* (2001) Synthesis and study of the fluorescein conjugate of the nucleotide dPTP. *Nucleos. Nucleot. Nucl.* **20** (4-7):1049.

Zaccolo *et al.* (1999) The effect of high-frequency random mutagenesis on in vitro protein evolution: a study on TEM-1 beta-lactamase. *Journal of Molecular Biology* **285** (2):775.

Zaccolo *et al.* (1996) An Approach to Random Mutagenesis of DNA Using Mixtures of Triphosphate Derivatives of Nucleoside Analogues. *Journal of Molecular Biology* **255**:589.

Lethal mutagenesis: Loeb, L. *et al.* (1999) *Proc. Natl. Acad. Sci. USA* **96**:1492.