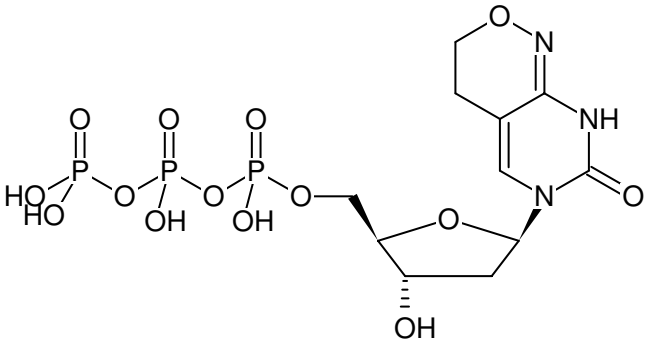
DATA SHEET

Jena Bioscience

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 research use only!

Shipping: shipped on blue ice

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: $C_{11}H_{18}N_3O_{14}P_3$ (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.