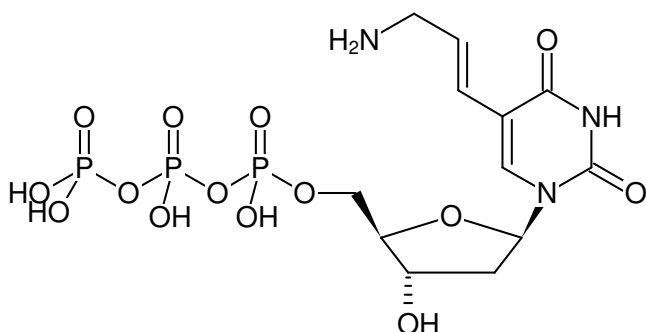




Aminoallyl-dUTP - Solution

5-(3-Aminoallyl)-2'-deoxyuridine-5'-triphosphate, Sodium salt

Cat. No.	Amount
NU-803S	10 µl (100 mM)
NU-803L	5 x 10 µl (100 mM)
NU-803XL	100 µl (100 mM)



Structural formula of Aminoallyl-dUTP - Solution

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: C₁₂H₂₀N₃O₁₄P₃ (free acid)

Molecular Weight: 523.22 g/mol (free acid)

Exact Mass: 523.02 g/mol (free acid)

CAS#: 116840-18-7

Purity: ≥ 95 % (HPLC)

Form: clear aqueous solution

Concentration: 100 mM - 110 mM

pH: 7.5 ± 0.5

Spectroscopic Properties: λ_{max} 289 nm, ε 7.1 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)

Applications:

Incorporation into DNA/cDNA by

- PCR with *Taq* polymerase^[1], in-house data
- Nick Translation with DNase I/ DNA Polymerase I^[2]
- Primer Extension with Klenow *exo*⁻^[3]
- 3'-End Labeling with Terminal deoxynucleotidyl Transferase (TdT)^[4]
- Reverse Transcription with MMLV Reverse Transcriptase^[2]

Description:

Aminoallyl-dUTP is recommended for two-step labeling of DNA/cDNA e.g. by PCR, Nick Translation, Primer Extension, 3'-End Labeling and Reverse Transcription. It is enzymatically incorporated into DNA/cDNA as substitute for its natural counterpart dTTP. The resulting Amine-functionalized DNA/cDNA can subsequently be labeled via the classic Amine/NHS Ester reaction that offers the choice

- to introduce a Biotin group (via NHS Ester of Biotin) for subsequent purification tasks
- to introduce fluorescent group (via NHS Ester of fluorescent dyes) for subsequent microscopic imaging

Selected References:

[1] Dirsch *et al.* (2007) Probe production for *in situ* hybridization by PCR and subsequent covalent labeling with fluorescent dyes. *Appl. Immunohistochem. Mol. Morphol.* **3**:332.

[2] Cox *et al.* (2004) Fluorescent DNA hybridization probe preparation using amine modification and reactive dye coupling. *BioTechniques* **36**:114.

[3] Cherkasov *et al.* (2010) New Nucleotide Analogues with Enhanced Signal Properties. *Bioconjugate Chem.* **21** (1):122.

[4] Unciti-Broceta *et al.* (2003) The use of solid supports to generate nucleic acid carriers. *Accounts of Chemical Research* **45**:1140.