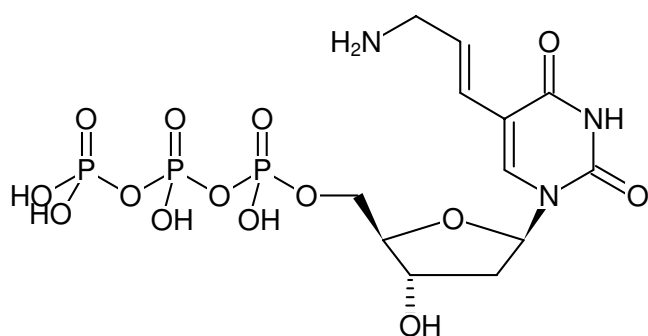




## Aminoallyl-dUTP - Solid

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

Cat. No.	Amount
NU-803-1	1 mg
NU-803-5	5 mg



Structural formula of Aminoallyl-dUTP - Solid

**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<sub>12</sub>H<sub>20</sub>N<sub>3</sub>O<sub>14</sub>P<sub>3</sub> (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:** solid

**Color:** white to off-white

**Spectroscopic Properties:** λ<sub>max</sub> 289 nm, ε 7.1 L mmol<sup>-1</sup> cm<sup>-1</sup> (Tris-HCl pH 7.5)

### Applications:

Incorporation into DNA/cDNA by

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

### 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.