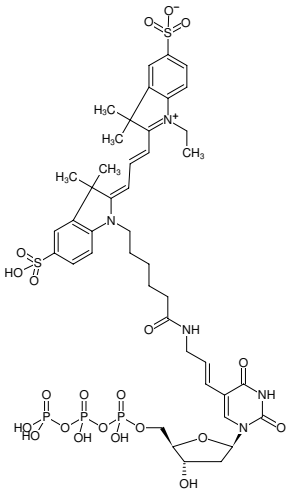
DATA SHEET

Jena Bioscience

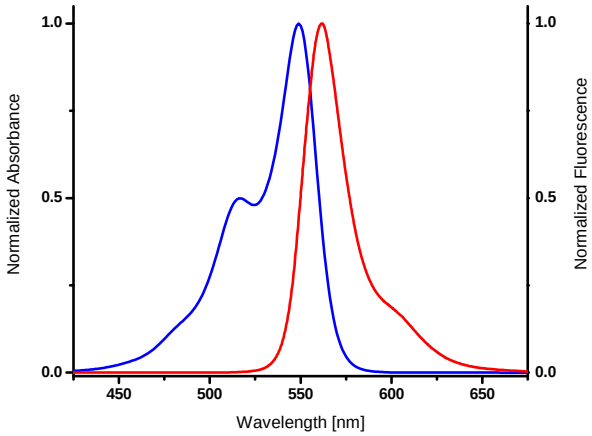
Aminoallyl-dUTP-Cy3

5-(3-Aminoallyl)-2'-deoxyuridine-5'-triphosphate, labeled with Cy3, Triethylammonium salt

Cat. No.	Amount
NU-803-CY3-S	10 µl (1 mM)
NU-803-CY3-L	5 x 10 µl (1 mM)



Structural formula of Aminoallyl-dUTP-Cy3



Excitation and Emission spectrum of Cy3

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: $C_{43}H_{56}N_5O_{21}P_3S_2$ (free acid)

Molecular Weight: 1135.97 g/mol (free acid)

Exact Mass: 1135.21 g/mol (free acid)

Purity: ≥ 95 % (HPLC)

Form: filtered solution (30 kDa) in 10 mM Tris-HCl

Color: pink

Concentration: 1.0 mM - 1.1 mM

pH: 7.5 ±0.5

Spectroscopic Properties: λ_{exc} 550 nm, λ_{em} 570 nm, ε 150.0 L mmol^{-1} cm^{-1} (Tris-HCl pH 7.5), CF_{260} 0.08

Applications:
Incorporation into DNA/cDNA by
- Primer Extension with Klenow fragment[1]
- PCR with *Taq* polymerase [in-house data]
- Nick Translation with DNAse I/ DNA Polymerase I [in-house data]

Description:
Aminoallyl-dUTP-Cy3 is recommended for direct enzymatic labeling of DNA/cDNA e.g. by PCR and Nick Translation. It is incorporated as substitute for its natural counterpart dTTP. The resulting Dye-labeled DNA/cDNA probes are ideally suited for fluorescence hybridization applications such as FISH or microarray-based gene expression profiling. Optimal substrate properties and thus labeling efficiency is ensured by an optimized linker attached to the C5 position of uridine.

Recommended Aminoallyl-dUTP-Cy3/dTTP ratio for PCR and Nick Translation: 30-50% Aminoallyl-dUTP-Cy3/ 50% dTTP

Please note: Protect the Dye-labeled dUTP from exposure to light and carry out experimental procedures in low light conditions. The optimal final concentration of the Dye-labeled dUTP may very depending on the application and assay conditions. For optimal product yields and high incorporation rates an individual optimization of the Dye-labeled-dUTP/dTTP ratio is recommended.

Selected References:

Aminoallyl-dUTP-Cy3

5-(3-Aminoallyl)-2'-deoxyuridine-5'-triphosphate, labeled with Cy3, Triethylammonium salt

[1] Walsh *et al.* (2017) Measurement of incorporation kinetics of non-fluorescent native nucleotides by DNA polymerases using fluorescence microscopy. *Nucleic Acids Res.* **45 (21):**e175.