DATA SHEET

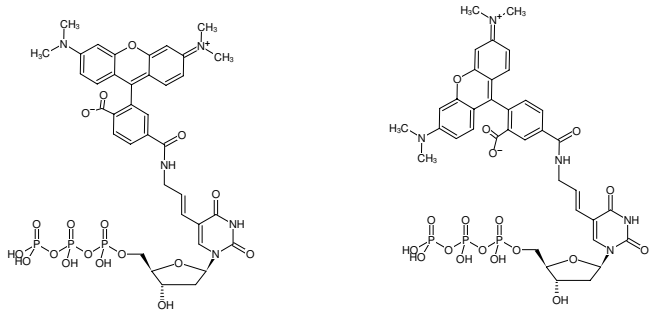
Jena Bioscience

Aminoallyl-dUTP-5/6-TAMRA

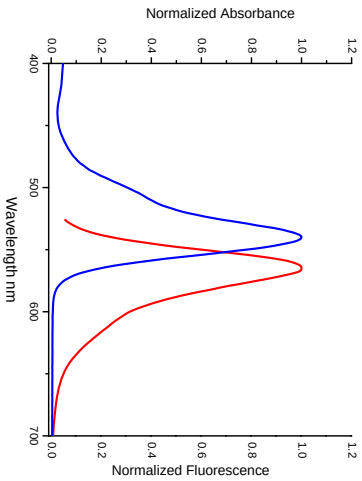
Tetramethyl-Rhodamine-5-dUTP

5-(3-Aminoallyl)-2'-deoxyuridine-5'triphosphate, labeled with 5/6-TAMRA, Triethylammonium salt

Cat. No.	Amount
NU-803-TAM	30 µl (1 mM)



Structural formula of Aminoallyl-dUTP-5/6-TAMRA



excitation and emission spectrum of 5/6-TAMRA

For research use only!

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: $C_{37}H_{40}N_5O_{18}P_3$ (free acid)

Molecular Weight: 935.66 g/mol (free acid)

Exact Mass: 935.16 g/mol (free acid)

Purity: ≥ 95 % (HPLC)

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

Color: pink to red

Concentration: 1.0 mM - 1.1 mM

pH: 7.5 ±0.5

Spectroscopic Properties: λ_{abs} 545 nm, λ_{em} 575 nm, ε 90.0 L mmol^{-1} cm^{-1} (Tris-HCl pH 7.5)

Applications:
Incorporation into DNA/cDNA by
- Nick Translation with DNAse I/ DNA Polymerase I [in-house data, [1,2]]

Description:
Aminoallyl-dUTP-5/6-TAMRA is recommended for direct enzymatic labeling of DNA/cDNA by 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-5/6-TAMRA/dTTP ratio for Nick Translation: 35% Aminoallyl-dUTP-5/6-TAMRA/ 65% 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:
[1] Idziak *et al.* (2014) Insight into the Karyotype Evolution of Brachypodium Species Using Comparative Chromosome Barcoding. *PLOS One* **9(3)**:e93503.

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[2] Hasterok *et al.* (2006) Alignment of the Genomes of Brachypodium distachyon and Temperate Cereals and Grasses Using Bacterial Artificial Chromosome Landing With Fluorescence in Situ Hybridization. *Genetics* **173**:349.