

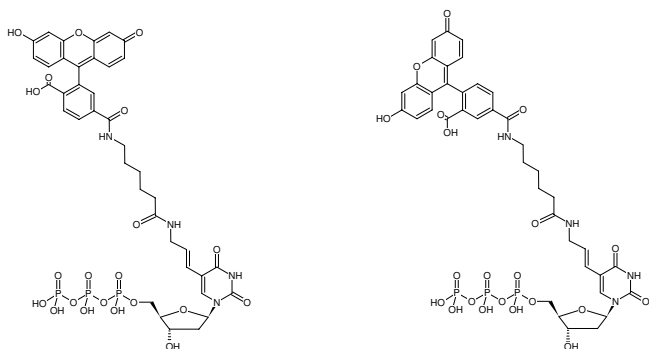


## Fluorescein-12-dUTP

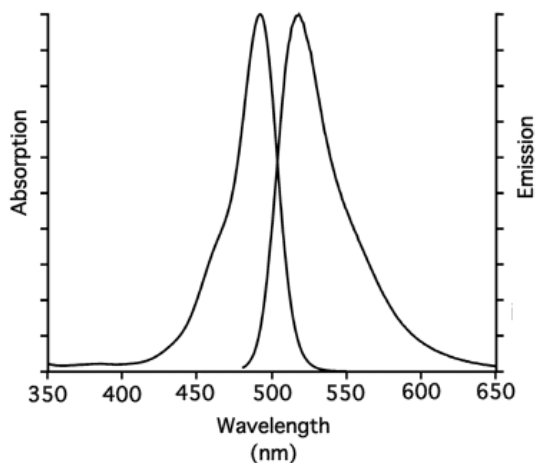
Fluorescein-X-(5-aminoallyl)-dUTP

5/6-Fluorescein-X-(5-aminoallyl)-2'-deoxyuridine-5'-triphosphate, Triethylammonium salt

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



Structural formula of Fluorescein-12-dUTP



Excitation and Emission spectrum of 5/6-FAM

**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>39</sub>H<sub>41</sub>N<sub>4</sub>O<sub>21</sub>P<sub>3</sub> (free acid)

**Molecular Weight:** 994.69 g/mol (free acid)

**Exact Mass:** 994.15 g/mol (free acid)

**Purity:** ≥ 95 % (HPLC)

**Form:** solution in water

**Color:** yellow-orange

**Concentration:** 1.0 mM - 1.1 mM

**pH:** 7.5 ± 0.5

**Spectroscopic Properties:** λ<sub>exc</sub> 492 nm, λ<sub>em</sub> 517 nm, ε 83.0 L mmol<sup>-1</sup> cm<sup>-1</sup> (Tris-HCl pH 7.5)

### Applications:

- Incorporation into DNA/cDNA by
  - PCR with *Taq* polymerase in-house data, [1]
  - Nick Translation with DNase I/ DNA Polymerase I in-house data

### Description:

Fluorescein-12-dUTP 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 Fluorescein-12-dUTP/dTTP ratio for PCR and Nick Translation: 30-50% Fluorescein-12-dUTP/ 70-50% 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 vary 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] Wiegant et al. (2001) Probe Labeling and Fluorescence in situ Hybridization.



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