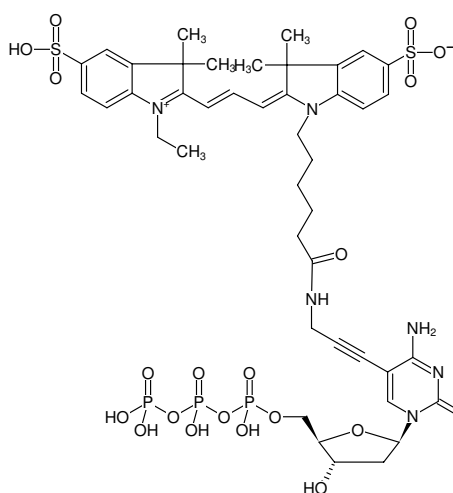




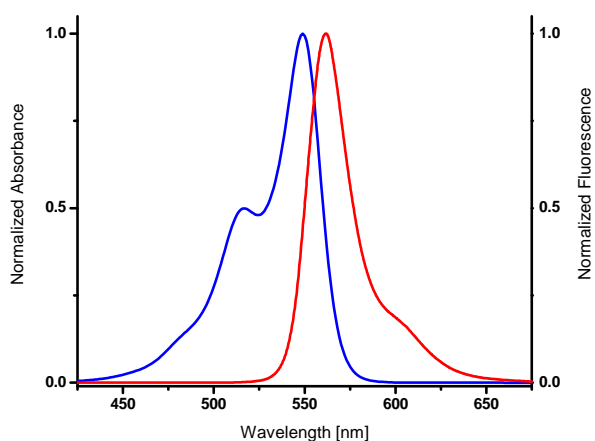
## 5-Propargylamino-dCTP-Cy3

5-Propargylamino-2'-deoxycytidine-5'-triphosphate, labeled with Cy3, Triethylammonium salt

Cat. No.	Amount
NU-809-CY3-S	10 µl (1 mM)
NU-809-CY3-L	5 x 10 µl (1 mM)



Structural formula of 5-Propargylamino-dCTP-Cy3



excitation and emission spectrum of Cy3

**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>43</sub>H<sub>55</sub>N<sub>6</sub>O<sub>20</sub>P<sub>3</sub>S<sub>2</sub> (free acid)

**Molecular Weight:** 1132.97 g/mol (free acid)

**Exact Mass:** 1132.21 g/mol (free acid)

**Purity:** ≥ 95 % (HPLC)

**Form:** solution in 10 mM Tris-HCl

**Color:** pink

**Concentration:** 1.0 mM - 1.1 mM

**pH:** 7.5 ± 0.5

**Spectroscopic Properties:** λ<sub>exc</sub> 550 nm, λ<sub>em</sub> 570 nm, ε 150.0 L mmol<sup>-1</sup> cm<sup>-1</sup> (Tris-HCl pH 7.5)

### Applications:

- Incorporation into DNA/cDNA by
  - Primer Extension with Klenow fragment<sup>[1]</sup>
  - PCR with Taq polymerase in-house data
  - Nick Translation with DNase I/ DNA Polymerase I in-house data

### Description:

5-Propargylamino-dCTP-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 dCTP. 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 cytidine.

Recommended Propargylamino-dCTP-Cy3/dCTP ratio for PCR and Nick Translation: 30-50% Propargylamino-dCTP-Cy3/ 70-50% dCTP

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



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#### Selected References:

[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.

Ramsay *et al.* (2010) CyDNA: Synthesis and Replication of Highly Cy-Dye Substituted DNA by an Evolved Polymerase. *J. Am. Chem. Soc.* **132 (14)**:5096.