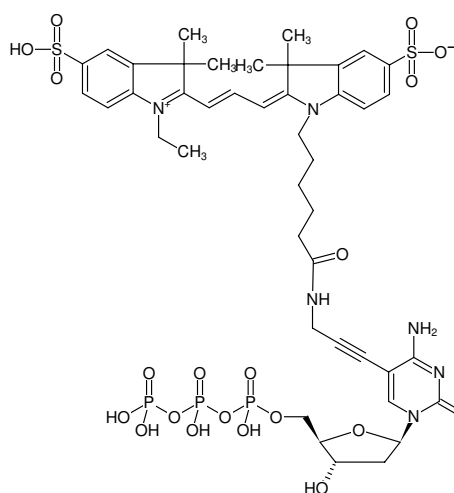




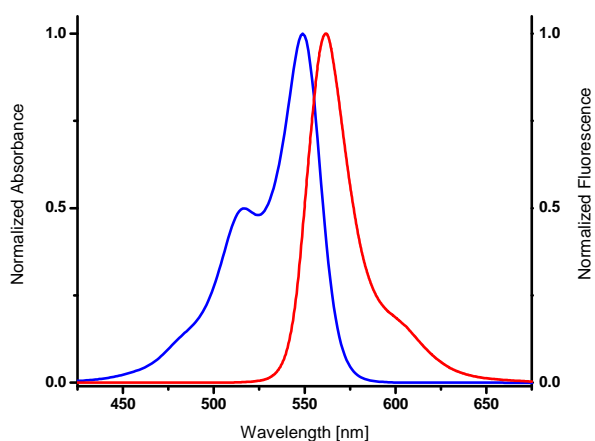
5-Propargylamino-dCTP-Cy3

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 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: C₄₃H₅₅N₆O₂₀P₃S₂ (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_{exc} 550 nm, λ_{em} 570 nm, ε 150.0 L mmol⁻¹ cm⁻¹ (Tris-HCl pH 7.5)

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:

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 very 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.