DATA SHEET

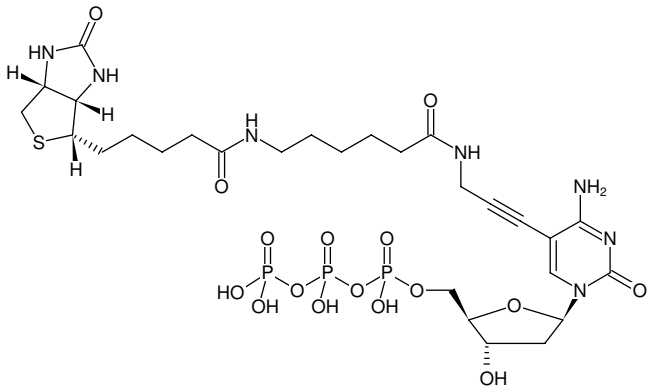
Jena Bioscience

Biotin-11-dCTP

Biotin-X-5-Propargylamino-dCTP

γ-[N-(Biotin-6-amino-hexanoyl)]-5-propargylamino-2'-deoxycytidine-5'-triphosphate, Triethylammonium salt

Cat. No.	Amount
NU-809-BIOX-S	200 µl (1 mM)
NU-809-BIOX-L	5 x 200 µl (1 mM)



Structural formula of Biotin-11-dCTP

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: $C_{28}H_{44}N_7O_{16}P_3S$ (free acid)

Molecular Weight: 859.67 g/mol (free acid)

Exact Mass: 859.18 g/mol (free acid)

CAS#: 136632-30-9

Purity: ≥ 95 % (HPLC)

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

Color: colorless to slightly yellow

Concentration: 1.0 mM - 1.1 mM

pH: 7.5 ±0.5

Spectroscopic Properties: λ_{max} 294 nm, ε 9.3 L mmol^{-1} cm^{-1} (Tris-HCl pH 7.5)

Applications:
FISH[1, 2]

SNP-analysis[1]

Nick-translation[2]

TUNEL[3]

Description:
Biotin-11-dCTP is enzymatically incorporated into DNA/cDNA as substitute for its natural counterpart dCTP. The resulting Biotin-labeled DNA/cDNA probes are subsequently detected using streptavidin conjugated with horseradish peroxidase (HRP), alkaline phosphatase (AP), a fluorescent dye or agarose/magnetic beads. Optimal substrate properties and thus labeling efficiency as well as an efficient detection of the Biotin moiety is ensured by a 11-atom linker attached to the C5 position of cytidine.

Recommended Biotin-11-dCTP/dCTP ratio for PCR and Nick Translation: 50% Biotin-11-dCTP/ 50% dCTP

Please note: The optimal final concentration of Biotin-11-dCTP may very depending on the application and assay conditions. For optimal product yields and high incorporation rates an individual optimization of the Biotin-11-dCTP/dCTP ratio is recommended.

Related Products:
Biotin-16-dUTP, #NU-803-BIO16
Biotin-16-dCTP, #NU-809-BIO16
Biotin-11-dUTP, #NU-803-BIOX
Digoxigenin-11-dUTP, #NU-803-DIGX

Selected References:

[1] Ye *et al.* (2001) Fluorescent microsphere-based readout technology for multiplexed human single nucleotide polymorphism analysis and bacterial identification. *Human Mutation* **17**:305.

[2] Backx *et al.* (2008) Direct fluorescent labelling of clones by DOP PCR. *Molecular Cytogenetics* **1**:3.

[3] Jones *et al.* (2003) Herpes simplex virus type 2 induces rapid cell death and functional impairment of murine dendritic cells in vitro. *J. Virology* **77**:11139.

Bishop *et al.* (2008) APOBEC3G Inhibits Elongation of HIV-1 Reverse Transcripts. *PLoS Pathogens* **4**:e1000231.