

Biotin-11-dUTP

Store at -20°C

molecular biology grade

Biotin- Σ -aminocaproyl-[5-(3-aminoallyl)]-2'-deoxyuridine 5'-triphosphate

Cat. No.
PGN008

Concentration: 1 mM
Volume: 50 μ L
Amount: 50nmol
Formula: C₂₈H₄₁N₆O₁₇P₃Na₃
Molecular Weight: 927.6 (acid form: 861.6)
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Description

Biotin-11-dUTP (biotin- ϵ -aminocaproyl-[5-{3-aminoallyl}-2'-deoxyuridine-5'-triphosphate]) is supplied as 1 Mm aqueous solution titrated to pH 7.0-7.5 with NaOH. The nucleotide is designed for enzymatic non-radioactive labeling of DNA by PCR, nick-translation, cDNA synthesis, random primed labeling, or primer extension. Biotin-11-dUTP can be enzymatically incorporated into DNA with Reverse Transcriptases, Taq DNA Polymerase, phi29 DNA Polymerase, Klenow Fragment, exo-, Klenow Fragment, and DNA Polymerase I.

General characteristics

λ_{max} =240 nm, ϵ =10.7 $\times$ 10³ M⁻¹cm⁻¹ (pH 7.0)

λ_{max} =289 nm, ϵ =7.1 $\times$ 10³ M⁻¹cm⁻¹ (pH 7.0)

CERTIFICATE OF ANALYSIS

Purity is $\geq$ 96%, determined by HPLC. Concentration is 1 ± 0.05 mM as determined spectrophotometrically in potassium phosphate buffer (pH 7.0) using a molar absorption coefficient of 10.7×10^3 mM⁻¹ cm⁻¹ at 240 nm, and 7.1×10^3 mM⁻¹ cm⁻¹ at 290 nm.

pH is 7.0-7.5, determined according to Ph. Eur. 2.2.3 Ribonucleases. Incubation of 2,000 bases RNA transcript with 1 μ L of 1 mM Biotin-11-dUTP at 37 °C for 4 hours and separation on an agarose gel resulted in no decrease in RNA transcript band intensity compared to control.

Endo- and exonucleases. Incubation of single stranded and double stranded radiolabeled oligonucleotides with 8 μ L of 1 mM Biotin-11-dUTP for 4 hours at 37 °C, separation on a denaturing polyacrylamide gel and phosphoimaging did not detect DNA degradation.

Nicking activities. Incubation of 1 μ g of supercoiled pUC19 DNA with 1 μ L of 1 mM Biotin-11-dUTP at 37 °C for 17 hours and separation on an agarose gel did not generate neither linearised plasmid nor relaxation of supercoiled plasmid as compared to control.

Functional test. Random primed DNA labeling with Biotin-11-dUTP using Klenow Fragment, exo-.

