

dTTP

Store at -20°C

Cat. No.

PGN017

Pack Size

0.25ml

Concentration: 100 mM

Volume: 0.25 mL

Amount: 25 µmol

Formula: $C_{10}H_{14}N_2O_{14}P_3Na_3$

Molecular Weight: 548.1 (acid form: 482.1)

Description

dTTP (2'-deoxythymidine 5'-triphosphate) is supplied as a 100 mM aqueous solution titrated to pH 7.3-7.5 with NaOH.

Applications

For use in PCR, real-time PCR, high fidelity and long PCR, LAMP-PCR, cDNA synthesis, RT-PCR, RDA, MDA, DNA labeling, and DNA sequencing.

CERTIFICATE OF ANALYSIS

Purity is ≥99%, determined by HPLC.

Concentration is 100±3 mM determined spectrophotometrically in potassium phosphate buffer (pH 7.0) using a molar absorption coefficient of 15.4 mM⁻¹cm⁻¹ at 259 nm.

pH is 7.3-7.5, determined according to Ph. Eur. 2.2.3

Endo- and exonucleases. Incubation of single stranded and double stranded radiolabeled oligonucleotides with 1 µL of 20 mM dTTP for 4 hours at 37°C, separation on a denaturing polyacrylamide gel and phosphoimaging did not detect DNA degradation.

Ribonucleases. Incubation of 2,000 bases RNA transcript with 1 µL of 20 mM dTTP at 37°C for 4 hours and separation on an agarose gel resulted in no decrease in RNA transcript band intensity compared to control.

Nicking activities. Incubation of 1 µg of supercoiled pUC19 DNA with 1 µL of 20 mM dTTP at 37°C for 17 hours and separation on an agarose gel did not generate linearised plasmid, and relaxation of supercoiled plasmid as compared to control.

E.coli DNA. Quantitative PCR test on ABI Prism 7000 SDS, which uses amplification of E.coli 23S rRNA gene fragment did not detect E.coli DNA.

Human DNA. Quantitative PCR test on ABI Prism 7000 SDS, which uses amplification of human genomic DNA fragment did not detect human DNA.

Functional test. 1. PCR amplification of a single-copy gene fragment (1 kb) from 10 copies of human genomic DNA using Pfu DNA polymerase.

2. PCR amplification of 5 kb DNA fragment from series of lambda DNA dilutions using Pfu DNA polymerase.



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