Thermo SCIENTIFIC

PRODUCT INFORMATION

dNTP Mix, 5 mM each

molecular biology grade

#AB-0196 1 mL

Lot _ **Expiry Date _**

Store at -20 °C

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Description

The dNTP Mix is a premixed solutions of 5 mM of each dATP, dCTP, dGTP and dTTP at pH 7.5 for a total dNTP concentration of 20 mM.

The Mix offers the possibility to reduce the number of pipetting steps and the risk of reaction set up errors.

Application

For primer extension procedures, add 1 µL of dNTP Mix in a total 25 µL reaction mix to give a final concentration of 200 µM of each dNTP.

Storage Conditions

Store at -20 °C until ready for use. Avoid repeated freeze thawing.

CERTIFICATE OF ANALYSIS

Concentration of each dNTP is 5±0.5 mM as determined spectrophotometrically under UV, using milimolar absorption coefficient of 40 $mM^{-1}cm^{-1}$ (pH 7.0).

Purity is determined for each component separately by HPLC.

Endo- and exonucleases (for each component separately)**.** Incubation of single stranded and double stranded radiolabeled oligonucleotides with 1 µL of 0.5 mM dNTP for 4 hours at 37°C, separation on denaturing polyacrylamide gel and phosphoimaging did not detect DNA degradation.

Ribonucleases (for each component separately). Incubation of 2,000 base RNA transcript with 100 nmol dNTP at 37°C for 4 hours and separation on agarose gel resulted in no decrease in RNA transcript band intensity compared to control.

Nicking activities (for each component separately). Incubation of 1 µg of supercoiled pUC19 DNA with dNTP at 37°C for 17 hours and separation on agarose gel did not generate linearised plasmid, and relaxation of supercoiled plasmid as compared to control.

***E.coli* DNA**. Quantitative PCR test, which uses amplification of *E.coli* 23S rRNA gene fragment did not detect *E.coli* DNA.

Human DNA. Quantitative PCR test, 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.

Quality authorized by:  Jurgita Zilinskiene

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