SibEnzyme®

T4 DNA Polymerase

S E339
200 units
5,000 u/ml

Lot: 32
Exp: 05/19
Store at -20C

For more details scan the code

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CERTIFICATE OF ANALYSIS

Source:
An *E.coli* strain that carries the cloned phage T4 DNA Polymerase gene.

T4 DNA Polymerase catalyzes the synthesis of DNA in the 5` -> 3` direction and requires the presence of template and primer. This enzyme has a 3` -> 5` exonuclease activity.

Storage Conditions:
20 mM Tris-HCl (pH 7.5); 50 mM Kcl;
10 mM 2-mercaptoethanol ; 50% glycerol.
Store at - 20° C.

1X SE-T4 DNA Polymerase Buffer:
67 mM Tris-HCl,(pH 8.8@ 25° C), 6.7 mM $MgCl_2$, 16.7 mM $(NH_4)_2SO_4$, 1 mM DTT.

Applications:
- polishing ends;
- probe labeling using replacement synthesis.

Unit Definition:
One unit is defined as the amount of enzyme required to incorporate 10 nmol of dNTP into an acid precipitable material for 30 minutes at 37°C.

Unit Assay Conditions:
1 x T4 DNA Polymerase Reaction Buffer, 33 µM dNTPs including [^{3}H]-dTTP and 70 µg/ml denatured calf thymus DNA.

Quality Control Assays:
Nonspecific endonuclease assay:
No appearance of nicked DNA was detected after incubation of 1µg supercoiled pUC19 DNA with 5 units of enzyme for 4 hours at 37° C.
No alteration of the pattern of DNA bands was detected after incubation of 1µg λ/HindIII DNA fragments with 5 units of enzyme in 50 µl of reaction mixture for 16 hours at 37° C.

Oligonucleotide Assay:
No detectable degradation of a single-stranded and double-stranded deoxyribooligonucleotides was observed after incubation with 5 units of enzyme for 3 hours at 37° C.

Reagents Supplied with Enzyme:
10X SE-T4 DNA Polymerase Buffer.