Texas BioGene, Inc.

Taq DNA Polymerase (recombinant)

Ref:

Catalog #	Product Description
38501	Taq DNA Polymerase (250 Units/vial)
38502	Taq DNA Polymerase (500 Units/vial)
38503	Taq DNA Polymerase (1,000 Units/vial)

Features

- Thermostable -half life at 95°C is more than 40 minutes
- Generates PCR products with 3'-dA overhangs
- Incorporates modified nucleotides (e.g., biotin-, digoxigenin-, fluorescently-labeled nucleotides)

Source

- *E.coli* cells with a cloned *pol* gene from Thermus aquaticus

Molecular Weight

- 94 kDa monomer

Applications

- PCR amplification of DNA fragments as long as 4.5 kb
- Generation of PCR product for cloning

Quality Control

- The absence of endodeoxyribonucleases, exodeoxyribonucleases and ribonucleases confirmed by appropriate quality tests
- Functionally tested in PCR

Definition of Activity Unit

- One unit of the enzyme catalyzes the incorporation of 10 nmol of deoxyribonucleotides into a polynucleotide fraction (adsorbed on DE-81) in 30 min at 70°C
- Enzyme activity is assayed in the following mixture: 67 mM Tris-HCl (pH 8.8 at 25°C), 6.7 mM MgCl2, 1 mM 2-mercaptoethanol, 50 mM NaCl, 0.1 mg/ml BSA, 0.75 mM activated calf thymus DNA, 0.2 mM of each dNTP, 0.4 MBq/ml [^{3}H]dTTP

Storage Buffer

- The enzyme is supplied in: 20 mM Tris-HCl (pH 8.0), 1 mM DTT, 0.1 mM EDTA, 100 mM KCl, 0.5% (v/v) Nonidet P40, 0.5% (v/v) Tween 20 and 50% (v/v) glycerol.

Inhibition and Inactivation

- Inhibitors: Ionic detergents (deoxycholate, sarkosyl and SDS) at concentrations higher than 0.06, 0.02 and 0.01%, respectively.
- Inactivated by phenol/chloroform extraction.

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