Taq DNA Polymerase, recombinant

Cat. No.
T 7301 (250 units) **T 7302 (500 units)** **T 7303 (2,000 units)**
T 7304 (5,000 units) **T 7305 (10,000 units)**

Conc: 5 U/µl **Store at -20°C (non-frost-free)**

Description

Taq DNA Polymerase is purified from *E. coli.* expressing a cloned *Thermus aquaticus* DNA polymerase gene. This enzyme has both a 5' → 3′ DNA polymerase and a 5′ → 3′ exonuclease activity but lacks a 3' → 5′ exonuclease activity. The enzyme consists of a single polypeptide with a molecular weight of approximately 94 kDa. Taq DNA polymerase is heat-stable and will synthesize DNA at elevated temperatures from single-stranded templates in the presence of a primer.

Kit Size

Component	250 U	500 U	2000 U	5000 U	10,000 U
Taq DNA Polymerase	50 µl	100 µl	2x200 µl	5x200 µl	10x200 µl
10X PCR Buffer (No Mg^{++})	1ml	1ml	3x1.5ml	7x1.5ml	15x1.5ml
25 mM $MgCl_2$	1ml	1ml	3x1.5ml	7x1.5ml	15x1.5ml

Storage Buffer

20 mM Tris-HCl (pH 8.0 @ 25°C), 0.1 mM EDTA, 1 mM DTT, 50% (v/v) glycerol, 1% (v/v) Triton X-100

10X PCR Buffer, No Mg^{++}

100mM Tris-HCl (pH 8.3 at 25°C), 500mM KCl

The PCR Buffer is supplied as a 10X concentrate and should be diluted for use.

Note: The optimal Mg^{++} concentration should be determined empirically but in most cases a final concentration of 2 mM will produce satisfactory results

Unit Definition

One unit incorporates 10 nmol of deoxyribonucleotide into acid-precipitable material in 30 minutes at 74°C.

Unit assay conditions: 25 mM TAPS (pH 9.3), 50 mM KCl, 2 mM MgCl2, 1 mM DTT, 0.5 mg/ml activated salmon sperm DNA, 0.2 mM dATP, dCTP, dGTP, dTTP

Quality Control

This product has passed the following quality control assays: functional absence of double- and single-stranded endonuclease activity; >90% homogeneous by SDS gel electrophoresis; functional absence of contaminating 5'- and 3'-exonuclease activity.

For research use only. Not intended for any animal or human therapeutic or diagnostic use