Taq DNA Polymerase (contains 10x PCR buffer, magnesium chloride alone)

Item number: PC1103

Specification: 500U/1000U/2500U

Concentration: 5U/μL

Storage: -20℃ storage, valid for at least one year.

Product description:

Taq DNA Polymerase is isolated and purified from Escherichia coli cloned with Thermus aquaticus DNA Polymerase gene by induction expression. Its molecular weight is 94 KD. The enzyme has 5 '-3' DNA polymerase activity and 5 '-3' exonuclease activity, but no 3 '-5' exonuclease activity. Taq DNA Polymerase has A elongation rate of 1-2 kb/ min in PCR reaction, and the product has A 3 'terminal band A, which can be directly used for T/A vector cloning. Taq DNA polymerase is not contaminated by exogenous nuclease and bacterial genomic DNA, and has good stability and strong specificity.

Activity definition:

1 unit (U) Taq DNA Polymerase activity is defined as the amount of enzyme required to incorporate 10nmol of deoxynucleotides into an acid-insoluble substance using activated salmon sperm DNA as a template at 74℃ for 30min.

Quality control:

The purity of Taq DNA Polymerase was more than 99% according to SDS-PAGE. No exogenous nuclease activity was detected. No host residual DNA was detected by PCR. It can effectively amplify single copy genes in human genome. Stored at room temperature for a week, no significant activity changes.

Enzyme storage buffer:

20mM Tris-HCl (pH 8.0); 0.1mM EDTA; 1mM DTT; 100mM KCl ; 50% glycerol; stabilizer

Scope of application (for reference only):

For less than 6kb of DNA fragments with low fidelity requirements of PCR amplification, DNA labeling, primer extension, sequence determination, flat end plus A, etc., the product can be directly used for T/A vector cloning.

Recommended PCR conditions:

PCR system (50μL reaction system as an example)

Template <0.5μg

upstream primer (10μM) 1μL

downstream primer (10μM) 1μL

10×Buffer (without Mg^{2+}) 5μL

25mM $MgCl_2$ 3μL

dNTP (2.5mM each) 4μL

Taq DNA Polymerase 0.5-1μL

ddHO_2 up to 50μL

What to watch for:

1. When adding samples for PCR reaction system, Taq DNA Ploymerase is added in the last step, and the whole process should be operated on ice.
2. When taking Taq DNA Ploymerase for PCR reaction, please use autoclave treated suction heads.

Related products:

PC1120	*2×Taq PCR MasterMix (with dye)*
PC1300	*Pfu DNA Polymerase*
PC2200	*dNTPs Mix(10mM each)*
D1020	*10×DNA loading buffer*
T1060	*50×TAE buffer*
G8142	*GoldView Type II Nucleic Acid Stain (5000×)*