Fast high fidelity DNA polymerase

specification No. : PC1210
Specification: 250UConcentration: 5U/μL
Storage: -20℃ storage, valid for at least one year.

Product introduction:

High fidelity fast DNA polymerase is a molecular modification of ultra high fidelity enzyme, suitable for all PCR amplification reaction, amplification product is flat end. The enzyme has ultra-high fidelity (fidelity is more than 50 times that of Taq DNA polymerase and more than 6 times that of pfu DNA polymerase), fast amplification speed (simple template speed can reach 10-15sec/1kb), and high efficiency (for complex templates such as plant genome DNA). Can effectively amplify 10kb of specific gene fragments), high sensitivity, resistance to amplification inhibitors and other typical advantages, it is a new generation of ultra-high fidelity DNA polymerase. The product contains a uniquely formulated 5×Buffer, which makes the PCR amplification reaction more stable, sensitive and efficient.

Activity definition:

1 unit (U) high fidelity rapid 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 ° C for 30 minutes.

Quality control:

The purity was more than 99% by SDS-PAGE, and no exogenous nuclease activity was detected. PCR method detected no host residual DNA, which can effectively amplify single copy genes in human genome; Stored at room temperature for one week, there was no obvious change in activity.

Enzyme storage buffer:

20mM Tris-HCl (pH 8.3); 0.1mM EDTA; 1mM DTT; 100mM KCl ; 50% glycerol; 20mM $MgCl_2$; Stabilizer.

Scope of application: (50μL reaction system as an example)

Template	<0.5μg
Forward Primer (10 μM)	1μL
Reverse Primer (10 μM)	1μL
5 x Buffer+ (with $MgCl_2$)	10μL
dNTP Mixture(2.5mM each)	1μL
Fast high-fidelity DNA Polymerase (5U/μL)	0.5-1μL
ddH_2O	up to 50μL

Note:

1. Prepare the reaction system on ice as much as possible, and finally add high fidelity fast DNA polymerase. The amount of genomic DNA is usually 100ng, the amount of plasmid DNA is usually 5-30ng, cDNA template: 1μg RNA for 20μl RTReaction) According to the specific conditions of the experiment to adjust the amount of template to achieve good amplification effect;
2. The amount of fidelity fast DNA polymerase is between 0.5-2ul/50μl, depending on the amount of template and the length of PCR product;
3. Gently mix to avoid bubbles, briefly centrifuge to the bottom of the PCR tube and then put into the PCR instrument for reaction.

Setting of PCR reaction cycle:

95℃	2min	
95℃	20s	30-40 cycles
50-60℃	20s	
72℃	15-30s/1kb	
72℃	5min	

Note: Extension time The size of the amplified fragment can be adjusted appropriately, it is recommended that the plasmid or genome template: 30-35cycles; cDNA template: 40 cycles.