Tinzyme Co., Limited

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B.HotStart DNA Polymerase

Product Number: PC97

Shipping and Storage

-20℃.

Components

Component	PC97
B.HotStart DNA Polymerase(5U/ul)	50μl
5×HotStart Taq Buffer with Mg^{2+}	1ml×2
dNTPs (10mM each)	200μl

Description

B.HotStart DNA Polymerase is a mixture of anti Taq monoclonal antibodies and Taq DNA Polymerase, suitable for Hot Start PCR. Before high-temperature heating, anti Taq monoclonal antibodies bind to Taq DNA polymerase, inhibiting the activity of the polymerase, thereby inhibiting non-specific amplification caused by non-specific annealing of primers or primer dimerization under low-temperature conditions. The anti Taq monoclonal antibody has denatured in the initial DNA denaturation step of the PCR reaction, so there is no need for a hot start step and can be used under conventional PCR reaction conditions. This product is suitable for high-specificity PCR reactions, Multiplex PCR, high GC content (>60%), secondary structure, and other genome amplification and large-scale genome amplification detection with strong background.

Features

With the advantages of high specificity, sensitivity, and strong stability, the product has a wide range of uses.

Application

1. High specificity PCR reaction;
2. Complex template amplification;
3. Multiplex PCR;
4. Genomic amplification testing;
5. Fluorescence quantitative PCR.

Quality control

After multiple column purification, only a clear and single target band was visible in SDS-PAGE gel detection, and there was no contamination of nucleic acid endonucleases or exonucleases detected.

Storage buffer

Tris-HCl (pH8.0), 20 mM; KCl, 100mM; EDTA, 0.1 mM; DTT, 1 mM; Tween20, 0.5%; Nonidet P-40, 0.5%; Glycerol, 50%。

Unit definition

Using activated salmon sperm DNA as a template/primer, the activity of an acidic insoluble substance is defined as one active unit (U) when consuming 10 nmol of whole nucleotide at 74℃ for 30 minutes.

Suggestion

The PCR product amplified using this product has a 3-terminal "A" protrusion and can be directly cloned into a T vector.

Protocol

1. Common reaction systems (50μl) :

5×HotStart Taq Buffer with Mg^{2+}	10μl
Upstream primer	0.2-1.0μM(Final Conc.)
Downstream primer	0.2-1.0μM(Final Conc.)
dNTPs (10mM each)	1μl
Template	1-50ng(Plasmid) 10ng-1μg(Genome)
B.HotStart DNA Polymerase(5U/μl)	0.25μl (1.25U)
ddH_2O	Up to50μl

2. Common PCR reaction programs:

2.1. Two step amplification program

Step	Temperature	Time	Cycle
Pre denaturation	94℃	1min	1
Denaturation	95℃	20s	35-40
Annealing/Extension	60℃	Adjust according to product length	

2.2. Three step amplification program:

Step	Temperature	Time	Cycle
Pre denaturation	94℃	1min	1
Denaturation	95℃	15s	35-40
Annealing	50-60℃	20s	
Extension	72℃	Adjust according to product length	