TIANGEN®

ET210831

Long *Taq* DNA Polymerase

Cat. no. 4992766/4992767

Storage: -30~-15°C for two years.

Concentration: 2.5 U/μl

Product size

Product Components	4992766	4992767
Long *Taq* DNA Polymerase	250 U	500 U
10× Long *Taq* Buffer I	1.8 ml	1.8 ml
10× Long *Taq* Buffer II	1.8 ml	1.8 ml

TIANGEN BIOTECH (BEIJING) CO., LTD.
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Introduction

Long *Taq* DNA Polymerase is an independently developed thermo-stable DNA polymerase with 3'-5' exonuclease activity. It possesses high amplification efficiency and high fidelity. Provided with two kinds of buffer, Long *Taq* DNA Polymerase could amplify varied templates. For simple templates, it can amplify up to 40 kb; For complex templates such as GC-rich and repeated sequences, it can syntherize up to 15 kb. The PCR products can be used directly in TA-cloning procedures. If required of high cloning efficiency, please purify, add A and then make T/A-cloning.

Unit Definition

One unit of Long *Taq* DNA Polymerase is defined as the amount that incorporates 10 nmol of dNTPs into acid-insoluble material within 30 min at 74°C with activated salmon sperm DNA as the template-primer.

Storage Buffer

20 mM Tris-HCl (pH 8.0), 0.1 mM EDTA, 1 mM DTT, 100 mM KCl, Stabilizers, 50% Glycerol.

10× Long *Taq* Buffer

Provided with two kinds of buffer, 10×Long *Taq* Buffer I and 10×Long *Taq* Buffer II. Please use Buffer I first, if it fails to amplify the template, use Buffer II.

Applications

PCR amplification of long DNA fragments, and complex templates such as GC-rich and repeated sequences, e.g., gene map construction, sequencing, molecular genetics research.

Quality Control

Test results show no activity of foreign nuclease. Single copy gene in human genome could be amplified effectively. No significant activity change after storing at room temperature (15-30°C) for one week.

Example

Note: The following example is only for reference, user must set up optimal reaction system according to different reaction conditions such as different templates or primers etc.

1. For 50 μl PCR reaction system: 1 kb fragment of human genomic DNA was amplified (If use different reaction system, please proportionally increase or decrease the amount of reaction components referring to this system).

Template	< 1 μg
Primer 1 (10 μM)	1 μl
Primer 2 (10 μM)	1 μl
10× Long *Taq* Buffer I	5 μl
dNTP Mixture (2.5 mM)	4 μl
Long *Taq* (2.5 U/μl)	0.5-1 μl
ddH_2O	up to 50 μl

2. PCR cycles set-up:

94°C 3 min	
94°C 30 sec	} 30 cycles
55°C 30 sec	
72°C 1 min	
72°C 5 min	

3. Result detection: Load 5 μl PCR products to agarose gel for detection.