TIANGEN®

ET210831

Taq Plus DNA Polymerase

Cat. no. 4992769/4992770

Storage: -30~-15°C for two years.

Concentration: 2.5 U/μl

Product size

Product Components	4992769	4992770
Taq Plus DNA Polymerase	250 U	500 U
10× *Taq* Plus Buffer	1.8 ml	1.8 ml

TIANGEN BIOTECH (BEIJING) CO., LTD.
HTTP://WWW.TIANGEN.COM/EN

The product is used for research only, neither intended for the diagnosis, or treatment of a disease, nor for the food, or cosmetics etc.

Introduction

Taq Plus DNA Polymerase is a special blend of *Taq* polymerase and *Pfu* polymerase. It possesses both 5'-3' and 3'-5' exonuclease activity. The advantages of *Taq* Plus DNA Polymerase has high productivity and fidelity. Comparing to *Taq* polymerase, *Taq* Plus can efficiently amplify large DNA fragments (20 Kb for simple templates and 10 Kb for complex templates). Besides, it possesses higher extension rate and amplification efficiency than *Pfu* Polymerase.

Taq Plus DNA Polymerase generates PCR products with 3'-dA overhangs that can be directly used in TA-cloning. To obtain higher cloning efficiency, however, PCR products could be purified and added 3'-dA overhangs before TA cloning procedures.

Unit Definition

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

Quality Control

The purity of SDS-PAGE is more than 99%; No activity of exogenous nuclease is detected; Single gene in human genome could be amplified effectively; No significant activity change when stored at room temperature (15-30°C) for one week.

Storage Buffer

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

10× *Taq* Plus Buffer

200 mM Tris-HCl (pH9.0), 200 mM KCl, 100 mM $(NH4)_2SO_4$, 15 mM $MgCl_2$ and other components.

Applications

Amplify DNA fragments from complex templates (e.g. Genome) with high fidelity, for applications such as gene cloning, Site-directed mutagenesis, SNP Analysis etc.

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× *Taq* Plus Buffer	5 μl
dNTP Mixture (2.5 mM)	4 μl
Taq Plus (2.5 U/μl)	0.5-1 μl
ddH_2O	up to 50 μl

2. PCR cycle set-up:

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

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