

## 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](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

Purity up to standard by SDS-PAGE assay; 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 (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, 15 mM MgCl<sub>2</sub> 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.**

- 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 <sub>2</sub> O	up to 50 μl

- PCR cycle set-up:

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

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