

## Taq Plus DNA Polymerase

Cat.No.: ORT15-R01

**Description:** *Taq* Plus DNA Polymerase is a kind of high fidelity *Taq* DNA Polymerase mixture of *Taq* DNA Polymerase and proofreading DNA Polymerase, which allows for the amplification of long templates, up to 10kb, with high fidelity. The two enzymes act synergistically during PCR to generate more accurate and longer PCR products with greater yields compared to *Taq* DNA Polymerase alone. PCR products, amplified up to 10kb in length with *Taq* Plus DNA Polymerase, generate a mixture of blunt ends and single base (A) 3' overhang. It is often used in some PCR amplifications that require high fidelity and complex template structures (such as high GC content, secondary structure, etc.). The products can be used for direct T/A cloning, but their efficiency is not as high as PCR products amplified with *Taq* polymerase alone.

### Product contents:

- 1) *Taq* Plus DNA Polymerase (5U/ $\mu$ L, 500U)
- 2) 10X *Taq* Plus Reaction buffer, 1mL

### Features

5'→3' exonuclease activity	Yes
3'→5' exonuclease activity (fidelity)	Yes
Amplification size	< 30kb PCR
HotStart activity (chemical-mediated HotStart)	No
3'A-tailing	Yes
Expiration date (storage at -20°C)	2 years and 3 months

### Recommended PCR mixture and cycling condition

PCR mixture (Reaction vol. 50 $\mu$ L)		Cycle		
10X <i>Taq</i> Plus Reaction buffer	5 $\mu$ L	95°C	2 min	×1
10mM dNTP mix	1 $\mu$ L	95°C	20 sec	} ×35-40
Forward primer (10pmol/ $\mu$ L)	2 $\mu$ L	AT	40 sec	
Reverse primer (10pmol/ $\mu$ L)	2 $\mu$ L	72°C	1 min/kb	
Template DNA (< 200ng)	- $\mu$ L	72°C	5 min	×1
<i>Taq</i> Plus DNA polymerase (5U/ $\mu$ L)	0.25 $\mu$ L	4°C	$\infty$	
Add D.W to	50 $\mu$ L			

### Note:

- In general, *Taq* Plus DNA Polymerase can amplify fragments below 10kb well. Whether longer fragments can be successfully amplified is mainly related to the structure of the template and the design of primers. If it is difficult to amplify long fragments, it is best to use EF-*Taq* DNA Polymerase (OEF95-R).
- 10× *Taq* Plus Buffer contains 15mM MgCl<sub>2</sub>. If higher concentration is required, supplement accordingly.