# SuperAdd Taq DNA Polymerase

Research Use Only

#### **Product Code**

19101X

#### Component

- 1. SuperAdd Tag DNA Polymerase (5.0 U/ µl) 1,000 units, 200 µl
- 2. 10x Reaction Buffer (without Mg) 1.0 ml x 2 tubes
- 3. 25mM MgCl<sub>2</sub> 1.0 ml x 2 tubes

#### **Storage Condition**

Store at -20°C

## Description

SuperAdd Taq DNA Polymerase is a high-performance PCR DNA Polymerase designed to obtain PCR products in case of over 5kb as well as under 10kb of DNA amplified products (Long PCR). SuperAdd Taq DNA Polymerase contains the two enzymes blend of Add Taq DNA Polymerase and a small amount of highly proofreading enzyme.

#### Storage Buffer

20mM Tris-HCl (pH 8.0), 100mM KCl, 3mM MgCl $_2$ , 1mM DTT, 0.1% Nonidet P-40, 0.1% Tween® 20 and 50% (v/v) glycerol

#### 10X Reaction Buffer

100mM Tris-HCl (pH8.8), 500mM KCl, 1% Triton® X-100 and 20mM MgCl $_2$ 

## Storage and Stability

SuperAdd Taq DNA Polymerase is stable for 2 years when stored in a constant temperature freezer at less than -20°C.

## **Nucleic Acid Amplification Protocol**

1. Add the following components to a thin-walled PCR tube:

| Nuclease-Free Water                  | x µl      |
|--------------------------------------|-----------|
| 10x Reaction Buffer                  | 2 μΙ      |
| 10mM dNTP Mixture                    | 2 μΙ      |
| Forward primer (10µM)                | 0.25~2 µl |
| Reverse primer (10μM)                | 0.25~2 μl |
| DNA template                         | x μl      |
| SuperAdd Taq DNA Polymerase (5 U/μl) | 0.2 μΙ    |
| Total reaction volume                | 20 μΙ     |

 $<sup>^{\</sup>star}$  Recommendation for template DNA concentration in a 20  $\mu$ l reaction volume

- 1) Human genomic DNA: 0.1 ng  $\sim$  1  $\mu$ g
- 2) Bacterial genomic DNA: 0.1 ng ~ 100 ng
- 3) Plasmid DNA: 0.01 ng ~ 5 ng

### 2. PCR cycling

| Initial Denaturation            | 95°C, 5 min                           |
|---------------------------------|---------------------------------------|
| PCR Cycling<br>(25 – 40 cycles) | 95°C, 15 – 30 sec                     |
|                                 | 55 - 65°C, 15 – 30sec                 |
|                                 | 72°C, 30 sec per kb of product length |
| Final Extension                 | 72°C, 5 min                           |
| Hold                            | 12°C, ∞                               |

Note: For PCR products longer than 3~4kb, use an extension time of approximately 1min per kb DNA.