

## WellLong™ DNA Polymerase

Catalog Number **ML 102-01**

Storage Temperature **-20°C**

### Product Description

WellLong™ DNA Polymerase is a thermostable DNA polymerase that catalyzes the polymerization of nucleotides into duplex DNA in the 5' → 3' direction. WellLong™ DNA Polymerase is isolated from recombinant *E.coli* strain containing the *Taq* DNA polymerase gene from *Thermus aquaticus*. Using the WellLong™ DNA polymerase is the long PCR system that possible to routine extension of about 20 kbs, and can be obtained to PCR product more than 40 kbs at some templates.

### Contents

WellLong™ DNA Polymerase (2.5 units/ul)	250 units
10X Reaction Buffer	1 ml
10 mM dNTP Mixture (2.5 mM each)	0.5 ml

### Storage/Stability

WellLong™ DNA Polymerase, including buffers and reagents, should be stored immediately upon receipt at -20°C. If stored in the recommended temperature, this product will be stable until the expiration date printed out on the label.

### Storage Buffer

50 mM Tris-HCl, 0.1 mM EDTA, 1 mM DTT, Stabilizers, 50 % Glycerol

### Unit Definition

One unit is the amount of enzyme that will incorporate 10 nmol of dNTP into acid-insoluble products in 30 minutes at 72°C.

### Applications

- For DNA amplification by Polymerase Chain Reaction
- Gene cloning
- Primer extension

### PCR products

As most PCR products amplified with WellLong™ DNA Polymerase have one A added at 3'-termini, the obtained PCR product can be directly used for cloning into T-Vector. But in the case of cloning the long length product (>5 kb) into T-Vector, the cloning efficiency becomes quite low. Also it is possible to clone the product in blunt-end vectors after blunting and phosphorylation of the end.

### General Reaction Mixture

WellLong™ DNA Polymerase	0.5 ~ 1 ul
10X Reaction Buffer	5 ul
dNTP Mixture (2.5 mM each)	8 ul
Template	< 1 ug
Primer 1	0.2 - 1.0 uM (final conc.)
Primer 2	0.2 - 1.0 uM (final conc.)
Sterilized Distilled Water	Up to 50 ul

### Standard PCR Condition

Step	Temp.	Time	Cycles
Pre-denaturation	94°C	1 ~ 3 min	1
Denaturation	98°C	10 sec	30
Annealing & Extension	68°C	15 min	
Final extension	72°C	10 min	1

\* Denaturation conditions vary depending on the thermal cyclers and tubes used for PCR. The recommendation is for 1 ~ 10 sec at 98°C or 10 ~ 30 sec at 94°C.

### Notes

This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals. Also, do not use this product as food, cosmetic, or household item, etc..