

## Taq DNA Polymerase blue ready-to-load

### Features:

Maximo Taq-Blue DNA Polymerase provides robust PCR performance in a wide range of PCR applications and different templates. After PCR reaction the enzyme can be loaded to agarose gel, no dye and DNA loading buffer is needed. The enzyme is time- and cost saving, because it includes dye and loading buffer, already.

### Applications:

- Standard / General PCR with visible control
- High-throughput PCR
- Primer extension
- Gene mutation
- T/A cloning

### Description:

Maximo Tag-Blue DNA Polymerase is a thermostable DNA polymerase that possesses a 5'→3' polymerase activity and a double-strand specific 5'→3' exonuclease activity. The enzyme consists of a single polypeptide with a molecular weight of 94KD.

**Concentration:** 1 u/μl

### Unit definition:

One unit incorporates 10 nmol of deoxyribonucleotide into acid-precipitation material in 30min at 74 degree

### Storage Buffer:

25mM Tris-HCl (pH8.0), 100mM KCl, 0.1mM EDTA, 1mM DTT, 50% Glycerol, 0.5% NP 40, 0.5% Tween 20, in blue loading buffer

### Reaction Buffers supplied with the enzyme:

**10X Buffer I:** 500mM KCl, 100mM Tris-HCl, pH 9.0, 1% Triton X-100, 15mM MgCl<sub>2</sub>

**10X Buffer II:** 500mM KCl, 100mM Tris-HCl, p H 9.0, 1% Triton X-100

**MgCl<sub>2</sub>:** 25 mM

### Quality control:

- PCR with various templates – genomic DNA, Phage Lambda DNA
- 2,2 kb DNA amplification from 50 ng DNA
- batch variation and level of bacterial DNA contamination

**Transportation:** on blue ice

**Storage:** at -20°C for 12 months

### Usage:

Components	Volume per reation
10X reaction buffer I or <b>buffer II</b>	5 µl
25 mM MgCl <sub>2</sub>	1.5 µl (if you use <b>buffer II</b> )
dNTP-Mix (40mM)	1.0 µl
Up-stream primer (10 µM stock)	0,5-2.5 µl
Down-stream primer (10µM stock)	0.5-2,5 µl
Template DNA	0.1-15 ng/ml plasmind DNA 1-10 µg/ml genomic DNA
Maximo Taq DNA-Blue Polymerase (1 u/µl)	0.8 µl - 2 µl
Sterile dest. Water (molecular grade)	up to <b>50 µl total reaction volume</b>

### Note:

- vortex all solutions carefully before using
- dispense all reagents on ice
- add the enzyme after Template DNA
- may you have to optimize the MgCl<sub>2</sub> concentration for best result

### General Thermo-Cycler protocol:

Step	Time	Temperature
Initial denaturation	2-5 min	94-95 °C
<b>25-30 Cycles:</b>		
Denaturation	10-25 sec	94-95 °C
Annealing	10-25 sec	55-65 °C
Extension	60 sec	72 °C per 1kb
Final extension	5 min	72 °C

### Ordering Information:

Cat.-no	Description	Amount
S111	Maximo Taq-Blue DNA Polymerase	500 units
S112	Maximo Taq-Blue DNA Polymerase	5x500 units
S128	Maximo Taq-Blue DNA Polymerase	20x500 units
S129	Maximo Taq-Blue DNA Polymerase	100x500 units (or as bulk)
S129X	Maximo Taq-Blue DNA Polymerase	other amounts