Maximo Taq DNA Polymerase

Features:
Maximo Taq DNA Polymerase provides robust PCR performance in a wide range of PCR applications and different templates. Best value in terms of cost per unit.

Applications:
- Standard / General PCR
- Multiplex PCR
- High-throughput PCR
- Primer extension
- Gene mutation
- direct T/A cloning

Description:
Maximo Taq 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: 5 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% Nonident P40, 0.5% Tween 20

Reaction Buffers supplied with the enzyme:

10X Buffer I: 500mM KCl, 100mM Tris-HCl, pH 9.0, 1% Triton X-100, 15mM $MgCl_2$
$MgCl_2$: 100 mM

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

Transportation: on blue ice

Storage: at -20°C for 24 months

Usage:

Components	Volume per reaction
10X reaction buffer I	5 µl
100 mM $MgCl_2$	optional
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 plasmid DNA 1-10 µg/ml genomic DNA
Maximo Taq DNA Polymerase (5 u/µl)	0.2 - 1.0 µl
Sterile dest. Water (molecular grade)	up to **50 µl total reaction volume**

Note:
- vortex all solutions carefully before using

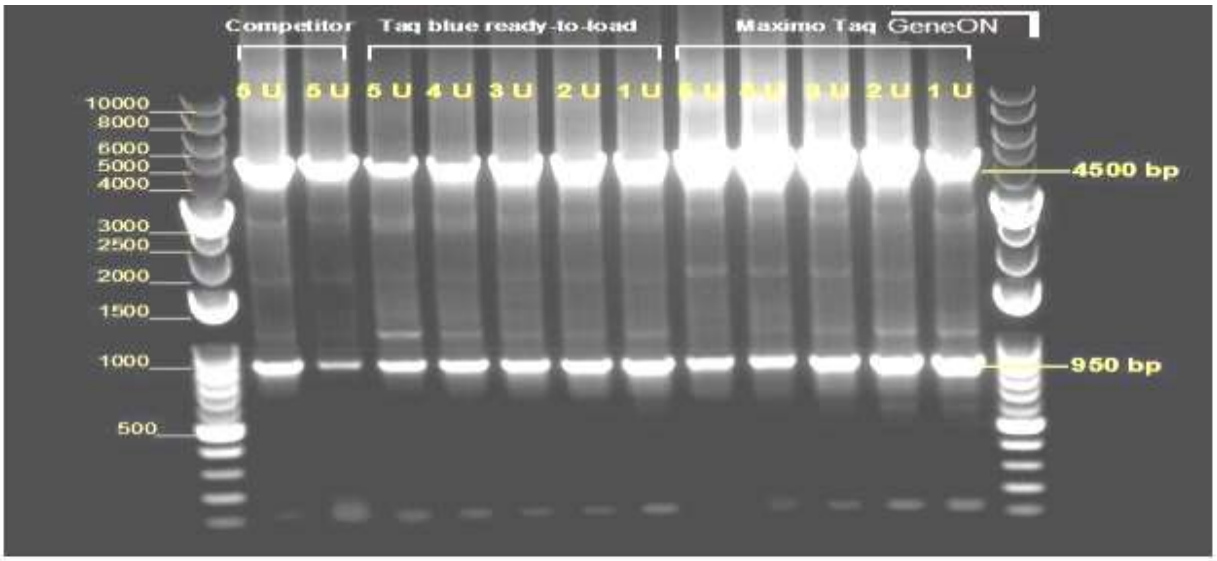
- dispense all reagents on ice
- add the enzyme after Template DNA
- may you have to optimize the $MgCl_2$ concentration for best result

General Thermo-Cycler protocol:

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

Ordering Information:

Cat.-no	Description	Amount
S101	Maximo Taq DNA Polymerase	500 units
S102	Maximo Taq DNA Polymerase	5x500 units
S103	Maximo Taq DNA Polymerase	20x500 units
S104	Maximo Taq DNA Polymerase	100x500 units



PCR amplification of plant DNA using the 5'-3' GATCCTGGCTCAGAACGAACGCTGGC and 3'-5' GCGGTACTTGTTYGCTATCGGT oligonucleotide primers at 1pM primer 1µl reaction and 1ng DNA template 1µl reaction. PCR reactions contained of 20mM $MgCl_2$ and 0.6mM of dNTP mix.

PCR amplification was carried out using a DNA thermal cycler, programmed to denature DNA at 95°C for 15 sec, anneal at 60°C for 15 sec and extend at 72°C for 4 min, for 35 cycles; additionally an initial 4 min denaturation at 95°C and a final 10 min extension at 72°C were included in the program.

A total of 15µl from each PCR reaction was separated by electrophoresis through a 0.8% agarose gel in an ethidium bromide 1 x TAE buffer.