

p-Superhot Taq DNA Polymerase

Features: Maximo p-Superhot Taq DNA Polymerase for qPCR is designed for Real Time PCR. Polyclonal antibodies inhibit the reaction at room temperature until after the first denaturation step. This prevents primer-dimers and other artefacts. Using the enzyme there is no need to adjust the existing standard PCR protocol in your lab.

Applications:

- Hot Start and real time PCR
- Multiplex PCR
- Amplification of complex genomic and cDNA templates
- no primer-dimers and other artefacts; inactive at room temperature
- short activation time
- enhanced PCR sensitivity

Description:

Maximo p-Superhot Taq DNA is an optimized mixture of a high processive Taq DNA Polymerase and polyclonal antibodies to Taq DNA. The enzyme 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 30 min at 72°C degree

Storage Buffer:

50 mM Tris-HCl, pH 8.2, 0.1 mM EDTA, 0.1% Tween 20, 0.1% NP40, 1 mM DTT, 50% Glycerol

Reaction Buffer:

10X Buffer I: 100mM KCl, 80mM (NH₄)₂SO₄, 100mM Tris-HCl, pH9.0, 0.5% Nonident P40, **15 mM MgSO₄**

Quality control:

Activity and performance test, SDS-PAGE purity, absence of endonucleases/nickases and exonucleases test

Usage:

Use your existing and optimized protocol. In contrast to chemically modified Taq DNA pol. where the first denaturation step needs up to 15 min, Maximo p-Superhot Taq does not need a prolonged heating or denaturation time.

Components	Volume per reaction
10X reaction buffer	5 μl
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 p-Superhot Taq DNA (5 u/μl)	0.2 - 1.0 μl
Sterile dest. Water (molecular bio. grade)	up to 50 μl total reaction volume

Note:

- vortex all solutions carefully before using
- add the enzyme after Template DNA
- may you have to optimize the MgCl₂ concentration for best result

General Thermo-Cycler protocol:

Step	Time	Temperature
Initial denaturation	4-5 min	94-95°C
25-30 Cycles: 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

Note:

- In case of low amount of DNA template, additionally cycles may be used

Transportation: on blue ice

Storage: at -20°C for 24 months

Ordering information:

Cat.-no	Description	Amount
S108	Maximo p-Superhot Taq DNA Pol. (qPCR)	200 units
S109	Maximo p-Superhot Taq DNA Pol. (qPCR)	5x200 units
S110	Maximo p-Superhot Taq DNA Pol. (qPCR)	5000 units