HotStart Taq DNA polymerase

Hotstart Taq DNA Polymerase (5 U/ µl)	100 µl
10×reaction Buffer (Mg2+ Plus)	1ml X 2ea

For research use only
Cat No: YT1701
Size: 500 U
Store at –20°C for 2 years

Description

HotStart Taq DNA Polymerase is a highly thermostable recombinant DNA polymerase derived from the thermophile, Thermus aquaticus, and is a hotstart Taq DNA Polymerase by specific anti-Taq monoclonal antibody.
HotStart Taq DNA polymerase catalyzes the 5'→3' synthesis of DNA but has no detectable 3'→5' proofreading exonuclease activity, and possesses low 5'→3' exonuclease activity, which results in a 3'-dA overhang on the PCR product.
Especially, this enzyme can be applied to multiplex PCR, allele specific PCR, SNP analysis and real-time PCR by fluorescent intercalating dye like SYBR Green and TaqMan Probe.

Storage Buffer
20mM Tris-HCl (pH8.0), 100mM KCl, 1mM DTT, 0.1% Nonidet P-40, 0.1% Tween® 20and 50% (v/v) glycerol
10X Reaction Buffer
100mM Tris-HCl (pH8.8), 500mM KCland 1% Triton® X-100 , 15mM mgCl2

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

Reagent	**Quantity for 20µl volume**
Nuclease-Free Water	X µl
10x Reaction Buffer	2.0 µl
10mM dNTP Mixture	2.0 µl
25mM MgCl2	0.4 ~ 2.0 µl [1]
Forward primer(10µM)	0.25 ~ 2.0 µl
Reverse primer (10µM)	0.25 ~ 2.0 µl
Template DNA	X µl
HotStart Taq DNA Polymerase (5 U/µl)	0.2 µl
Total	20 µl

- Recommendation for template DNA concentration in a 20 µl reaction volume
1)Human genomic DNA: 0.1 ng ~ 1 µg
2)Bacterial genomic DNA: 0.1 ng ~ 100 ng
3)Plasmid DNA: 0.01 ng ~ 5 ng

2. PCR Cycles

Step	Temperature	Duration
Initial Denaturation	95℃	10 minutes
25-40 Cycles	95℃ 55-65℃ 72℃	15-30 seconds 15-30 seconds 30 sec per kb of product length
Final Extension	72℃	5 minutes
Hold	12℃	∞

[1] -additional volume (µl) of MgCl2 per 20 µl reaction

Final MgCl2 conc.c reaction (mM)	1.5	2	2.5	3	3.5	4
Volume of 25 mM MgCl2	0	0.4	0.8	1.2	1.6	2