Hot Start Taq DNA Polymerase Master Mix

(1000 rxns)

Zellbio GmbH (Germany)

CAT No. ZX-22117-1000

www.zellx.de

Real time PCR | RT-PCR and quantitative RT-PCR | Genotyping with Taqman probes | PCR fragments amplification for TA or GC cloning (preferably use a proofreading polymerase for cloning purpose and a blunt cloning vector) (see our Pfu, High fidelity and Ultra High fidelity DNA polymerase) | Amplification from a limited DNA template or low copy number genes

!!! Caution: This product is for Research Use Only. Not for *in-vitro* Diagnostics !!!

Table of Contents

Please read this insert completely prior to using the product.

Introduction

ZellX® Hot Start Taq DNA Polymerase Master Mix is an optimized ready-to-use master mix that contains all PCR reaction reagents (except primers and DNA template) including dNTPs, stabilizer, $MgCl_2$ and hot start Taq DNA polymerase needed for running PCR reactions. ZellX® Hot start Taq DNA polymerase is a Taq DNA polymerase with a strong 5'→3' polymerase activity and a weak 5'→3' exonuclease activity but no 3'→5' exonuclease activity (proofreading); it bounds to a proprietary monoclonal antibody that blocks polymerase activity until inactivation occurs. The heat labile antibodies are rapidly inactivated by raising the temperature to 95-97°C for 4 minutes. This prevents or minimizes primer-dimer and nonspecific product amplification. containing extra nucleotides (preferentially adenine) without template at 3´ends results in 3´overhangs PCR fragments which allows the popular TA or GC cloning. The ZellX® Hot Start Taq DNA Polymerase Master Mix formulation saves time and eliminates or decreases the risk of error and contamination due to a reduced number of pipetting steps.

Materials supplied in the Kit

Component	*Quantity*
Hot Start Taq DNA Polymerase Master Mix (2X)	8 x 1.25 mL

Storage instruction

All reagents should be stored at -20°C upon receipt. Avoid repeated freezing and thawing.

Materials required but not supplied

Precision pipettes and disposable filter pipette tips (RNase & DNase free)

Nuclease-free tubes / strips / plates corresponding to the PCR device

Precautions

This kit should only be used by qualified personnel who have had laboratory safety instruction. The complete insert should be read and understood before attempting to use the product.

General remarks

- The instruction must be strictly followed. PCR machine / Thermocycler must be turned on and programmed in advance to avoid delays after setting up the reactions.
- Pipette tips should not be used more than once to prevent cross contamination.
- Reagents of different batches should not be mixed or used after their expiration dates.

Assay Procedure

For 20 µL reaction

- Thaw Master Mix on ice and mix them well. Collect liquid at the bottom of the tube with a quick spin.
- Set up the following reaction mixture.

Component	*Quantity*
qPCR Master Mix	10 µL
Forward Primer	0.75 µM
Reverse Primer	0.75 µM
DNA template	30-75 ng (Plasmid DNA) 100-500 ng (Genomic DNA)
Nuclease-Free Water	Up to 20 µL

Mix reagents thoroughly, and transfer to the thermocycler.

- Run the appropriate PCR cycling protocol on your PCR instrument

Step	*Number of Cycles*	*Temperature*	*Duration*
Initial activation	1	94°C	5 min
Amplification	40	94°C	35 sec
		TM	35 sec
		72°C	1min/kb
Cooling	1	72°C	7 min
		4°C	∞

- The appropriate PCR cycling protocol must be optimized by the end user
- high primer concentrations result in nonspecific amplification and should be avoided