



## Hot Start Taq DNA Polymerase Master Mix (250 rxns)

Zellbio GmbH (Germany)

CAT No. ZX-22117-250

[www.zellx.de](http://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 !!!**

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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<sub>2</sub> 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 binds 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

<i>Component</i>	<i>Quantity</i>
<b>Hot Start Taq DNA Polymerase Master Mix (2X)</b>	2 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 $\mu$ L 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.

<i>Component</i>	<i>Quantity</i>
<b>qPCR Master Mix</b>	10 $\mu$ L
<b>Forward Primer</b>	0.75 $\mu$ M
<b>Reverse Primer</b>	0.75 $\mu$ M
<b>DNA template</b>	30-75 ng (Plasmid DNA) 100-500 ng (Genomic DNA)
<b>Nuclease-Free Water</b>	Up to 20 $\mu$ L

Mix reagents thoroughly, and transfer to the thermocycler.

- Run the appropriate PCR cycling protocol on your PCR instrument

<i>Step</i>	<i>Number of Cycles</i>	<i>Temperature</i>	<i>Duration</i>
<b>Initial activation</b>	1	94°C	5 min
<b>Amplification</b>	40	94°C	35 sec
		TM	35 sec
		72°C	1min/kb
<b>Cooling</b>	1	72°C	7 min
		4°C	$\infty$

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