

## Features:

- The Master mix contains dUTP instead of dTTP
- The Master contains UNG (Uracil-N-Glycosylase)
- It contains EvaGreen as fluorescent dye
- The qPCR / RTD-PCR Master mix E2 is ready-to-use and is optimized for high specificity and sensitivity because of optimized reaction buffer
- easy to use because ready-to-use Master Mix
- The Master Mix can be used with ROX as reference dye (1x concentrated)

## Applications:

- Detection and quantification of DNA and cDNA targets
- Profiling gene expression
- Microbial detection
- Viral load determination

## Compatibility:

BioRad: iCycler, MyiQ, MiQ 2, iQ 5, CFX-96, CFX-384, MJ Opticon, Option2, Chromo4, MiniOpticon

Qiagen: Roto-Gene Q, Roto-Gene3000, Roto-Gene 6000

Eppendorf: Mastercycler realplex

Illumina: Eco RealTime PCR System

Cepheid: SmartCycler

Roche: LightCycler 480, LightCycler 2.0

## Description:

The Master Mix contains all reagents required for qPCR (except template and primer) in a premixed 2x concentrated ready-to-use solution. The high specificity and sensitivity of the mix is achieved by an optimized hot-start polymerase. Its activity is blocked at ambient temperature and switched on automatically at the onset of the initial denaturation. The thermal activation prevents the extension of non-specifically annealed primers and primer-dimer formations at low temperatures during PCR setup.

The mix offer dUTP instead of dTTP to prevent carry-over contaminations of DNA from previous PCR reactions. It contains optimized UNG (Uracil-N-Glycosylase) for the treatment at the onset of thermal cycling.

**Concentration:** The Mastermix is 2x concentrated

## List of components qPCR / RTD-PCR Master mix:

Hot-Start Polymerase for qPCR, dATP, dCTP, dGTP, dUTP, EvaGreen, optimized reaction buffer with KCl and MgCl<sub>2</sub>, Uracil-N-Glycosylase, stabilizers and enhancers, PCR-grade water

**Transportation:** with blue ice

**Storage:** at 4°C for 3 months, at -20°C for more than 12 months, Note: protect from Light

## Usage:

Components	Volume per reaction	final conc.
<b>2X qPCR / RTD-PCR Master mix E2 with UNG</b>	25 µl	1x
<b>Up-stream primer (10 µM stock)</b>	1,5 µl (range: 0,5-2.5 µl)	300 nM
<b>Down-stream primer (10µM stock)</b>	1,5 µl (range: 0.5-2,5 µl)	300 nM
<b>Template DNA</b>	5 µl (0.1-15 ng/ml plasmid DNA) (1-10 µg/ml genomic DNA)	< 500ng DNA
<b>Sterile dest. Water (included)</b>	up to 50 µl total reaction volume	

- vortex all solutions carefully before using and before PCR
- may you add the enzyme mix after Template DNA
- an individual optimization of annealing temperature may be necessary for new combinations of primers and Template DNA

## General Thermo-Cycler protocol for qPCR / RTD-PCR Master mix:

**Note:** working with EvaGreen just select the optical setting for FAM or SYBR Green at the cycler

Step	Time	Temperature
UNG treatment	1x2 min	50°C
Initial denaturation	1-3 min	95°C
<b>30-40 Cycles:</b>		
Denaturation	15-30 sec	95°C
Annealing	30-65 sec	55-65°C
Extension	30 sec (per 500bp)	72-75°C

**Note:** an individual optimization of annealing temperature may be necessary for new combinations of primers and Template DNA

## Order Information

Prod. No.	Description	Quantity
S9160	qPCR / real-time PCR Mastermix E2	100 rcs (2.5ml)
S9160L	qPCR / real-time PCR Mastermix E2	500 rcs (12.5ml)
S9160XL	qPCR / real-time PCR Mastermix E2	1000 rcs (25ml)