

## Features:

- optimized realtime PCR Mastermix using probe based detection (e.g. FRET, Molecular Beacons or TaqMan)
- The Master mix contains dUTP instead of dTTP
- The qPCR / RT-PCR Mastermix DLP1 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 for block based PCR Cycler
- 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

## 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 contains dUTP instead of dTTP and allows an UNG (Uracil-N-Glycosylase) treatment at the onset of thermal cycling to prevent carry-over contaminations of DNA from previous PCR reactions.

**Concentration:** The Master mix is 2x concentrated

**List of components:** Hot-Start Polymerase for qPCR, dATP, dCTP, dGTP, dUTP, optimized reaction buffer with KCl and MgCl<sub>2</sub>, 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

## Usage:

Components	Volume per reaction	final conc.
<b>2X qPCR Master mix DLP1</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:

Step	Time	Temperature
Initial denaturation	1-3 min	95°C
<b>30-40 Cycles:</b> Denaturation Annealing Extension	15-30 sec 30-65 sec 30 sec (per 500bp)	95°C 55-65°C 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
S9190	qPCR/real-time-PCR Master Mix DLP1	100 rcs (2,5 ml)
S9190L	qPCR/real-time-PCR Master Mix DLP1	500 rcs (12,5 ml)
S9190XL	qPCR/real-time-PCR Master Mix DLP1	1000 rcs (25 ml)