qPCR Master Mix DLP3

Features:
- The Master mix contains dUTP instead of dTTP
- The Mix contains ROX (500nM) as passive Reference dye (it provides a baseline in multiplex reactions)
- The qPCR / RTD-PCR Master mix DLP3 is ready-to-use and is optimized for high specificity and sensitivity because of optimized reaction buffer
- easy to us because ready-to-use Master Mix

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 offer dUTP instead of dTTP to prevent carry-over contaminations of DNA from previous PCR reactions.

Concentration: The Mastermix is 2x concentrated

List of components qPCR / RTD-PCR Master mix:
Hot-Start Polymerase for qPCR, dATP, dCTP, dGTP, dUTP, ROX, optimized reaction buffer with KCl and $MgCl_2$, 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.
2X qPCR / RTD-PCR Master mix DLP3	25 µl	1x
Up-stream primer (10 µM stock)	1,5 µl (range: 0,5-2.5 µl)	300 nM
Down-stream primer (10µM stock)	1,5 µl (range: 0.5-2,5 µl	300 nM
Template DNA	5 µl (0.1-15 ng/ml plasmid DNA) (1-10 µg/ml genomic DNA)	< 500ng DNA
Sterile dest. Water (included)	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:

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

Step	Time	Temperature
UNG treatment (optional)	1x2 min	50°C
Initial denaturation	1-3 min	95°C
30-40 Cycles: 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

Ordering information.

Cat.-no	Description	Amount
S210	qPCR Master mix DLP3	100 rcs / 50µl