

Features:

- The Master mix contains dUTP instead of dTTP
- The Master contains UDG (Uracil-Glycosylase)
- The Mix contains ROX (500nM) as passive Reference dye (it provides a baseline in multiplex reactions)
- The qPCR / RTD-PCR Master mix DLP4 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

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 offers dUTP instead of dTTP and UDG 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, ROX, UNG, optimized reaction buffer with KCl and MgCl₂, 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, protect from Light

| Components | Volume per reaction | final conc. |
|--|--|-------------|
| 2X qPCR Master mix DLP4, with UNG | 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 for qPCR / RTD-PCR Master mix:

| Step | Time | Temperature |
|--|---|----------------------------|
| UNG treatment | 2 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

Order Information

| Prod. No. | Description | Quantity |
|-----------|------------------------------------|-------------------|
| S9220 | qPCR/real-time-PCR Master Mix DLP4 | 100 rcs (2,5 ml) |
| S9220L | qPCR/real-time-PCR Master Mix DLP4 | 500 rcs (12,5 ml) |
| S9220XL | qPCR/real-time-PCR Master Mix DLP4 | 1000 rcs (25 ml) |