



## 2x qPCR Master Mix with SYBRGreen - high ROX

Article	Content
SL-9902HR-smp	1 ml, 100 rxn × 20 µl
SL-9902HR-5ML	5 ml, 500 rxn × 20 µl
SL-9902HR-10ML	10 ml, 1000 rxn × 20 µl
SL-9902HR-20ML	20 ml, 2000 rxn × 20 µl



**Long-Term Storage**  
at -20°C in the dark

**Short-Term Storage**  
at 4°C in the dark

### DESCRIPTION

Our **primaQUANT CYBR 2x qPCR Master Mix** is an optimized ready-to-use mixture for SYBRGreen-based assays. It contains a modified HotStart DNA Polymerase, SYBRGreen dye, as well as dNTPS and MgCl<sub>2</sub>. The sophisticated buffer system provides fast kinetics and target amplification even for difficult templates.

The **primaQUANT 2x Master Mix** contains all components - you just need to add primers and template DNA/cDNA.



### DID YOU KNOW?

- **primaQUANT CYBR** is also offered as a blue-colored mix for better handling.
- This Master Mix contains **high ROX** at a final concentration of 500 nM.
- **primaQUANT CYBR** is also available with low concentrations of or without ROX.

## Recommended Reaction Mixture per Well



### BEFORE YOU START

- After thawing, please **invert the Master Mix tube 6-8 times**.
- **Do not vortex** the Master Mix to avoid damaging the enzyme.

Component	Stock Concentration	20 $\mu$ l Reaction	10 $\mu$ l Reaction	Final Concentration
2x primaQUANT Master Mix	2x	10 $\mu$ l	5 $\mu$ l	1x
Forward Primer	4 $\mu$ M	1 $\mu$ l	0.5 $\mu$ l	200 nM (100 - 400 nM recommended)
Reverse Primer	4 $\mu$ M	1 $\mu$ l	0.5 $\mu$ l	200 nM (100 - 400 nM recommended)
Template DNA	-	variable	variable	0.1 - 10 ng per reaction
Sterile Water	-	adjust to 20 $\mu$ l	adjust to 10 $\mu$ l	-



### NOTE

For maximum efficiency and specificity, adjustments of annealing temperature as well as extension time, primer/probe concentration and template concentration may be needed.

### CALCULATOR TOOL

Please feel free to download our Excel sheet calculator to calculate the necessary volumes: [calculator.steinbrenner-laborsysteme.de](http://calculator.steinbrenner-laborsysteme.de).



**qPCR**  
 KnowledgeCenter



# Standard Protocol



**NOTE**

- Standard cycling conditions can be applied for the majority of qPCR assays out-of-the box.
- However, cycling conditions highly depend on the primer, probe, amplicon and input material and thus might require adjustments.

## 3-STEP PROTOCOL

Step	Time	Temperature	
Initial Denaturation	1 - 3 minutes	92°C - 95°C	
Denaturation	1 - 5 seconds	92°C - 95°C	
Annealing	1 - 5 seconds	60°C depending on primer	25 - 40 cycles
Extension	10 - 20 seconds	72°C	

## 2-STEP PROTOCOL

Step	Time	Temperature	
Initial Denaturation	1 minute	92°C - 95°C	
Denaturation	1 second	92°C - 95°C	
Annealing / Extension combined	10 - 20 seconds	60°C depending on primer	25 - 40 cycles

# Ultra-fast Protocol



**NOTE**

- Ultra-fast cycling conditions highly depend on the ramping rate of your qPCR cycler, primer, probe, amplicon and input material and thus might require adjustments.
- Ultra-fast cycling conditions can be applied for the majority of qPCR assays out-of-the box, provided that your primer/probe sets do not show unspecific binding.

## 3-STEP PROTOCOL

Step	Time	Temperature	
Initial Denaturation	1 minute	92°C - 95°C	
Denaturation	1 - 5 seconds	92°C - 95°C	25 - 40 cycles
Annealing	1 - 5 seconds	60°C depending on primer	
Extension	5 seconds	72°C	

## 2-STEP PROTOCOL

Step	Time	Temperature	
Initial Denaturation	1 minute	92°C - 95°C	
Denaturation	1 second	92°C - 95°C	25 - 40 cycles
Annealing / Extension combined	5 - 10 seconds	60°C depending on primer	

## Applications

Generally dye-based quantitative PCRs

DNA Genotyping

DNA SNP Analysis

RNA Expression

Single-Color Multiplexing

Telomerase Length Assays

miRNA Expression Analysis

Transcript Variant Analysis

### QUALITY CONTROL

Our **primaQUANT CYBR 2x qPCR Master Mix** undergoes stringent quality controls. Each lot is tested in a probe-based qPCR with cDNA and lambda DNA input.

Enzyme purity and homogeneity of > 98 % is validated using a Bioanalyzer SDS protein electrophoresis.

All Master Mixes are free of detectable endonuclease- & exonuclease activity:

- Incubation of 1 µg of plasmid DNA with 5 U for 4h at 37°C and 72°C
- Incubation of 1 µg of a DNA size standard with 5 U for 4h at 37°C and 72°C

### FURTHER INFORMATION

For more information, please visit our website: [www.steinbrenner.de](http://www.steinbrenner.de)



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## Further Products

Products that may also interest you

### REVERSE TRANSCRIPTION KIT



For the efficient cDNA synthesis out of total RNA extractions try the primaREVERSE RT-Kit with article number SL-9540.