ONE Step RT-qPCR Master Mix, 2X

REF **MM2191**

Σ **1ml/100 reaction**

Wet or Dry Ice

RUO **Store at: -20°C**

(Not more than 50 Freeze-Thawing cycles)

Components

ONE Step RT-qPCR Master Mix, 2X	1ml

Description

ONE Step RT-qPCR Master Mix, 2X is developed for synthesize first-strand cDNA and simultaneously amplify the desired sequence in a single reaction. It includes all of components necessary to cDNA synthesis and Real-time PCR (the high efficiency Reverse Transcriptase and Hot Start Taq DNA polymerase, dNTPs, Mg^{2+}, stabilizers, RNase inhibitor and RT-qPCR reaction components) except primers, probes and RNA template. This master mix enables fast and highly reproducible procedures on the most common real-time PCR apparatus, from either total RNA or mRNA, and it was specifically developed for probe-detection technology.

One Step RT-qPCR Master Mix, 2x contains:

100mM Tris-HCl (pH 8.3 at 25 C), 150mM KC, 0.6mM each deoxy nucleoside triphosphate, 10mM MgCl2.

Applications

1. Gene expression analysis
2. Single cell RT-qPCR
3. Virus detection kits

Product features

- Contains enzymes purified by a variety of chromatography methods in several stages.
- Contains Reverse Transcriptase enzyme that is stable in rising temperature and activates in temperature range of 42 - 70°C.
- The DNA polymerase included in the mix, is inactive at room temperature and its activation requires preheating at 95 °C for 5 min.
- The enzyme with hot start capability increases reaction specificity and sensitivity
- HS-Taq DNA polymerase activation requires not more than 5min heating
- High sensitivity for detection of viral RNA or low RNA concentration
- Using a specific antibody for the Taq DNA polymerase enzyme to inactivate the enzyme at room temperature
- Can be used with all standard Real Time PCR apparatus
- High efficiency of product production
- High speed and accuracy during testing
- High repeatability
- No contamination with bacterial DNA

Recommended RT-qPCR reaction mix

1. Defrost the reaction mixture and stir thoroughly.
2. Put thin-wall PCR tubes on ice and add the following components considering the final volume of a reaction mixture equal to 20µl:

Component	Volume	Final concentration
ONE Step RT-qPCR Master Mix, 2X	10µl	1X
Primer & Prob Mix	variable	-
RNA template	Variable	1pg – 1µg
Sterile water	up to 20µl	-

Recommended RT-qPCR cycles

Step	Temperature	Incubation time	Number of cycles
RT enzyme activity	55°C	10 min	1
Taq DNA Polymerase activation	95°C	5 min	1
Denaturation	95°C	10 sec	40-45
Annealing and extension	60°C	45 sec	

Signs

Signs	Definitions
RUO	For Research Use Only
	Name and address of the manufacturer of the product
REF	Product technical code
	Product shipping conditions
Σ	Number of usable tests

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