

## COVID-19 RT-qPCR Rapid Detection Kit

Store at -20°C

Cat. No.	Description	Quantity
<b>MBS4160442</b>	COVID-19 RT-qPCR Rapid Detection Kit	100 Rxns

### Product Description

The RT-qPCR Rapid Detection Kit for COVID-19/SARs-CoV-2 that can be used on human respiratory tract specimens.

- Highly specific for the ORF1ab and N target markers recommended by WHO and US CDC
- Results ready in less than 2 hours
- Compatible with standard RT-qPCR machines (Bio-Rad CFX96, QuantStudio's 7 Flex system)

### Kit Components

Product Component	Volume	Part No.
2X RT-qPCR MasterMix	1.25 ml	G628-1
COVID-19 Primers	100 µl	G628-2
COVID-19 Probes	100 µl	G628-3
Positive Control Template	10 µl	G628-4
RT-qPCR Enzyme Mix	40 µl	RT-13
Nuclease-free H <sub>2</sub> O	1.0 ml	RT-0

### Storage

Upon arrival, store the kit components at -20°C.

### Protocol

1. Thaw the following reagents on ice: COVID-19 Primers, COVID-19 Probes, 2X RT-qPCR MasterMix, and RT-qPCR Enzyme Mix. Mix individual components before use and assemble reaction on ice. Do not add more than one RNA sample into a single qPCR tube.

Components	20 µl <sup>1</sup> Sample(s)	20 µl <sup>1</sup> Positive Control	20 µl <sup>1</sup> Negative Control
RNA Sample	As required <sup>2</sup>	-	-
COVID-19 Primers	1 µl	1 µl	1 µl
COVID-19 Probes	1 µl	1 µl	1 µl
2X RT-qPCR MasterMix	10 µl	10 µl	10 µl
RT-qPCR Enzyme Mix	0.4 µl	0.4 µl	0.4 µl
Positive Control Template	-	1 µl	-
Nuclease-free H <sub>2</sub> O	up to 20 µl	up to 20 µl	up to 20 µl

<sup>1</sup>Reaction volumes of 20 µl are recommended.

<sup>2</sup>Start with 5 pg - 1 µg RNA sample per 20 µl reaction.

2. Use the Nuclease-free H<sub>2</sub>O for the Negative Control, and use Positive Control Template for the Positive Control setup.
3. Gently mix the reaction components. Briefly centrifuge. Transfer reaction setup to qPCR machine.

### Standard RT-qPCR Cycling Condition

Transfer the reaction setup into qPCR machine and set up the following cycling program. It is recommended to use BioRad's CFX96, or QuantStudio's 7 Flex system.

Steps	Temperature	Time	Cycle(s)
cDNA Synthesis	42°C	15 minutes	1
Pre-Denaturation	95°C	10 minutes	1
Denaturation	95°C	15 seconds	40
Annealing	60°C	60 seconds	

### Detection Channels

Four channels (FAM, HEX, ROX, & Cy5) are used in this one tube qPCR assay. It is recommended to perform the color (channel) calibration as requested by the instrument's manufacturer. Please refer to the instrument's user manual to perform this calibration.

Choose the FAM, HEX, ROX, and Cy5 channels for each sample to be tested with the COVID-19 RT-qPCR Rapid Detection Kit. Select "None" for ROX passive reference on any Applied Biosystem's qPCR machine.