

## Datasheet

### COVID-19 RT-qPCR Rapid Detection Kit (100 reactions)

|                  |  |
|------------------|--|
| Product Name     | COVID-19 RT-qPCR Rapid Detection Kit (100 reactions) |
| Catalogue Number | BSV-qPCR-06  |
| IVD or RUO       | RUO  |
| CE Marked        | No   |
| Size             | 100 reactions  |

#### Description:

To help researchers in the global fight against the coronavirus, abm has developed an RT-qPCR Rapid Detection Kit for COVID-19/SARS-CoV-2 that can be used on human respiratory tract specimens. The COVID-19 RT-qPCR Rapid Detection Kit is an ideal tool to detect COVID-19/SARS-CoV-2 by RT-qPCR method.

#### Product Details:

##### Features and Benefits:

- Highly specific for the ORF1ab and N target markers recommended by WHO and US CDC
- Ready-to-use reaction kit that includes MasterMix, Primers/Probes, and Internal Positive Control
- Can be used with samples collected from sputum and naso/oropharyngeal swabs
- Results ready in less than 2 hours
- Compatible with standard RT-qPCR machines (ABI 7500, Bio-Rad CFX96, etc.)

**Intended use:** Detection of COVID-19/ SARS-CoV-2 by RT-qPCR method

**Target genes:** ORF1ab and N genes as recommended by WHO and the US CDC

##### Specimen types:

- Sputum
- Naso/Oropharyngeal swabs

**Storage:** Upon arrival store the kit components at -20°C

**Regulatory/ Restrictions:** Intended for research purposes by qualified professionals and researchers only.

## Materials Supplied

1. 2X qPCR Master Mix
2. COVID-19 Primers
3. COVID-19 Probes
4. Positive Control Template
5. RT-qPCR Enzyme Mix
6. Nuclease-free H<sub>2</sub>O

## Protocol

| Components                     | 20 µl <sup>1</sup><br>Sample(s) | 20 µl <sup>1</sup><br>Positive Control | 20 µl <sup>1</sup><br>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.

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.
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 colour (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.