

Novel Coronavirus (SARS-CoV-2) Detection Kit

Real-time PCR based but as fast as rapid test

- 45 minutes of turn-around-time using GENECHECKER® UF-300 real-time PCR platform
- Simple workflow for minimized user handling
- Assay is designed to detect RdRP gene and N gene of COVID-19
- Compact and affordable solution that suits any application.

Why COVID-19 is being an issue throughout the world?

First reported from Wuhan, China, on 31 December 2019, SARS-CoV-2 is the cause of coronavirus disease 2019 (COVID-19) and generally spreads through human-to-human contact or respiratory droplet infection from coughs and sneezes and it is thought to have a zoonotic origin. The symptoms of COVID-19 include respiratory symptoms, fever, cough, shortness of breath and breathing difficulties. In severe cases, it can lead to pneumonia, severe respiratory acute syndrome, kidney failure and even death. Due to its high contagiousness and severeness, rapid detection of the virus should be performed as quickly as possible for setting up timely quarantine measure as well as proper medication and treatment.



Better detection assay to enhance your testing efficiency

Real-time PCR is one of the most well-known methods with good sensitivity and high accuracy for disease diagnostics. However, this technology used to have some disadvantages such as long turn-around-time or complicated workflow. We introduce SMARTCHECK® novel coronavirus (SARS-CoV-2) detection kit which is based on biochip sample format and provides relatively short turnaround-time with simple workflow while it offers key benefits of real-time PCR tests. The standard turn-around-time is 45 minutes using UF-300 real-time PCR platform

The kit is designed to detect two different target genes of COVID-19

SMARTCHECK® novel coronavirus (SARS-CoV-2) detection kit has been developed to detect both RdRP gene and N gene of SARS-CoV-2. The primer pairs and probes for the detection of these two target genes are pre-labeled (dehydrated) in the wells of the test chip so that user doesn't need to pipette primers and probes for running the test.

Kit Contents

Item	Quantity / Volume	Description
Premix	1 tubes	Includes Rtase for one-step RT-PCR
Nuclease free water	1 EA	For running controls
Test Chip	25 EA	With labeled primers and probes
Sealing Tapes	25 EA	For sealing the wholes of test chip after loading reaction mixtures

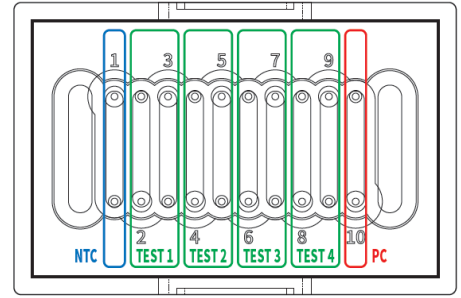
Storage Information

The premix should be stored at -20°C. Other contents should be stored at room temperature

Configuration of Test Chip

Primers and probes for detection of N gene of SARS-CoV-2 are labeled in well number 2, 4, 6 and 8 while primers and probes for detection of RdRP gene of SARS-CoV-2 are labeled in well number 3, 5, 7 and 9. Well number 1 is for running no template control and well number 10 is for running positive control. With this configuration, 4 samples can be tested per a run.

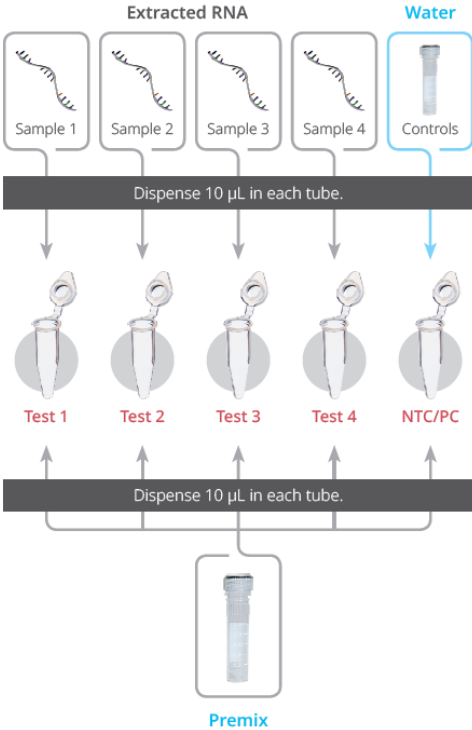
※ EACH WELL INCLUDES INTERNAL POSITIVE CONTROL.



Workflow

Step 1.

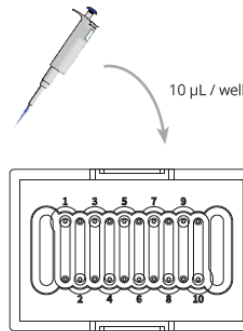
Preparing Reaction Mixture



5 min.

Step 2.

Sample Loading Into Test Chip

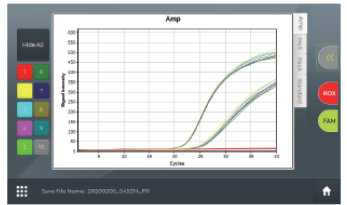


Prepared mixtures are loaded in each well of the chip where primer pairs and probes are pre-labeled. The mixture in a tube is dispensed in two wells of test chip corresponding to N gene and RdRP gene of COVID-19 respectively. Well number 1 is for no template control and well number 10 is for positive control where the mixture of DNA/RNase free water and premix is loaded.

Step 3.

PCR and analysis

GENECHECKER[®]
UF-300 Real-time PCR System



40 min.

Ordering Information

Catalog Number	Description	Pack Size
SGL-1021-100R (9799151401)	SMARTCHECK [®] novel coronavirus (SARS-CoV-2) detection kit	100 tests / pk (5 test chips / pk)

Related Product Information

Catalog Number	Description	Pack Size
ACN M61.01	AccuViral [®] Collection Kit (Swab & Transport media)	100 tests / pk
ACN 08.50	AccuViral [®] Viral RNA preparation Kit	100 tests / pk
SGX-C300	GENECHECKER [®] UF-300 Real-time PCR System	1 set



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