

# MTB (Mycobacterium tuberculosis) Detection Kit

Rapid MDx Solution for TB diagnosis with Approved Performance

## Key Summary

- 40 minutes of turn-around-time using **genechecker** UF-300 and UF-340 system
- Simple workflow for minimized user handling for multi-target detection
- Excellent testing performance assured by high sensitivity and specificity
- Assay is designed to detect Assay is designed to detect IS6110 gene and MPB64 gene of *Mycobacterium tuberculosis*
- Compact and affordable solution that suits any application

## WHY IS TB DIAGNOSIS STILL BEING A CHALLENGE?

Tuberculosis which is an infectious disease caused by tuberculosis bacteria, usually affects lungs, but can also affect other body organs, such as lymph nodes, kidney, peritoneum, intestine or even skin. According to announcement from WHO, estimated 10 million people fell ill with tuberculosis and a 1.4 million people died from TB worldwide in 2019. Early diagnosis is one of the key factors for treatment of the disease due to its side effects and additional infections caused by misdiagnosis. As a result, development and applications of tuberculosis assays to assure its high sensitivity and accuracy are still actively ongoing throughout the world.

## BETTER DETECTION ASSAY TO ENHANCE YOUR TESTING EFFICIENCY

This assay is containing Mycobacterium tuberculosis specific primer pairs and can diagnose Mycobacterium tuberculosis infection in 40 minutes. This assay uses real-time polymerase chain reaction (PCR) technology and TaqMan<sup>®</sup> Probe chemistry to detect target genes. Through PCR process, target-specific primers and probes combine with a single strand of cDNA and amplify using polymerase enzymes included in the premix formulation. Real-time amplification curves are displayed on the **genechecker** UF-300 / UF-340 real-time PCR platform by the method of monitoring fluorescence signals generated from the reporter dye on 5' end of the probes after exonuclease activities.

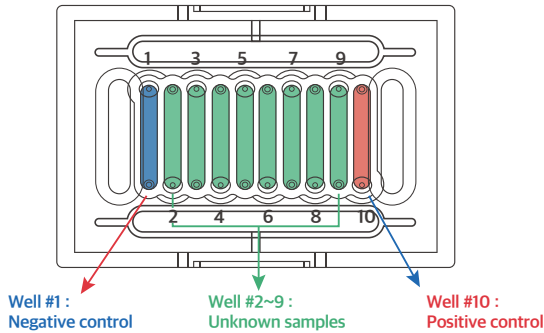
## THE KIT IS DESIGNED TO DETECT TWO DIFFERENT GENES OF MYCOBACTERIUM TUBERCULOSIS

**smartchek** MTB (Mycobacterium tuberculosis) Detection Kit has been developed to detect IS6110 gene and MBP64 gene of Mycobacterium tuberculosis. The primer pairs and probes for these two target genes are pre-labeled (dehydrated) in the wells of the test chip so that the user won't need to pipette primers and probes for running the test.

## KIT CONTENTS / STORAGE

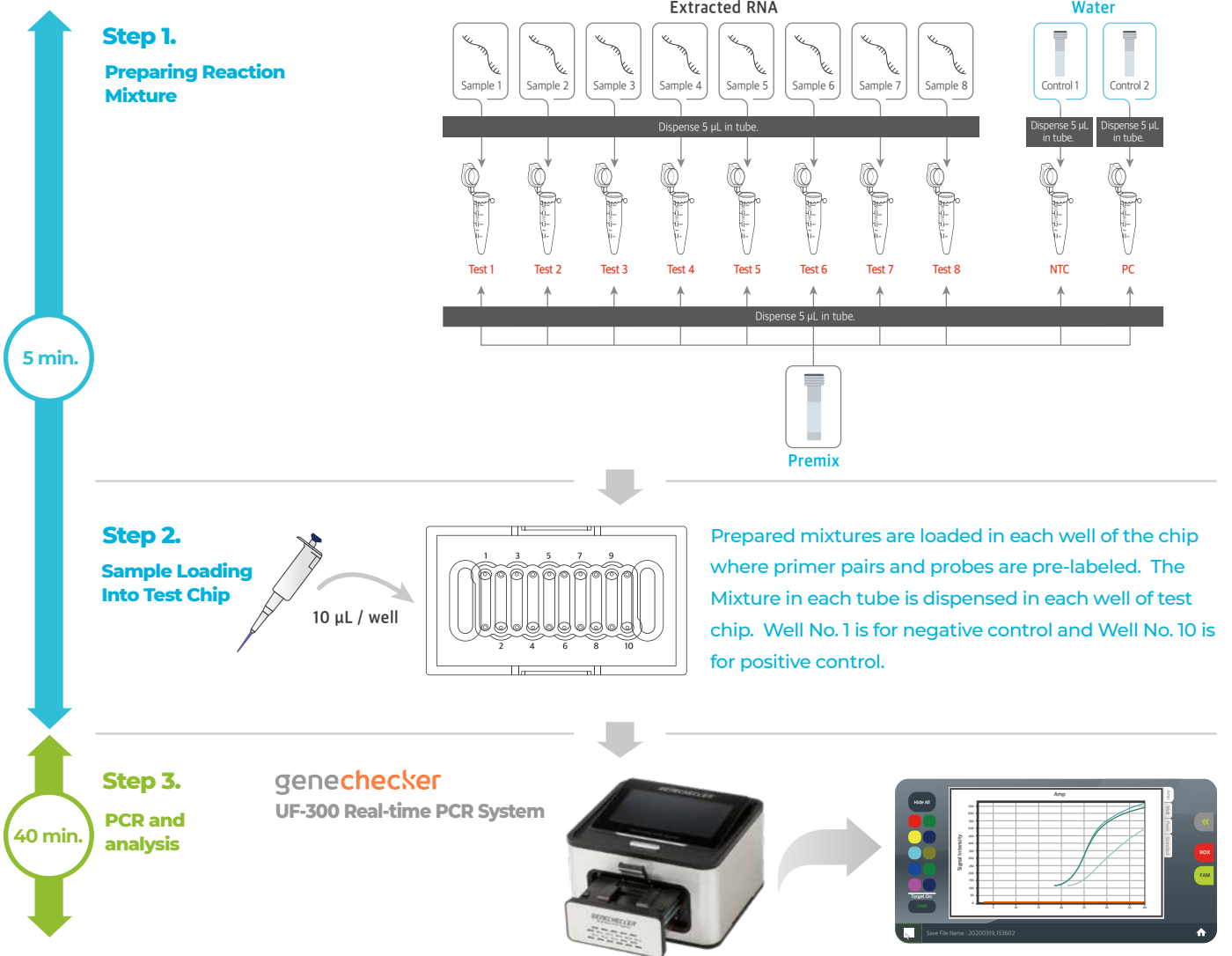
No.	Contents	Volume / Quantity	Description	Storage
1	Test Chip	25 EA	Individually vacuum packed	
2	Sealing Tapes	25 EA	Packed in plastic bag	
3	Premix	250 µL x 5 tubes	Tubes with blue label on the cap	Store at below -20 °C
4	Nuclease Free Water	50 µL x 5 tubes	Tubes with white label on the cap	
5	Microcentrifuge Tubes	250 EA	For mixing premix and template	

## CONFIGURATION OF TEST CHIP



Primers and probes for detection of IS6110 gene and MPB64 gene of Mycobacterium tuberculosis are labeled in each well. Well number 1 is for running negative control and well number 10 is for running positive control. With this test chip configuration, 8 samples can be tested per run.

## WORKFLOW



## ORDERING INFORMATION

Catalog Number	Product	Pack Size
9799151600	smartcheck MTB (Mycobacterium tuberculosis) Detection Kit	100tests/PK
1399100200	genechecker UF-300 Real-time PCR System	1 SET
1499100100	genechecker UF-340 Four-in-One Real-time PCR System	1 SET

Genesystem Co., Ltd.