



Respiratory Multiplex RT-PCR Kit

Simultaneous detection of SARS- CoV-2,
Influ A/B, and RSV A/B

Introduction

Human respiratory tract infections caused by pathogens like viruses and bacteria is found to be the predominant cause of hospitalization across all age groups. Respiratory infection diagnosis can be challenging, as a wide range of pathogens can cause acute respiratory infections presenting with similar clinical syndromes. Labsystems respiratory multiplex kit allows for the simultaneous quantitative detection of SARS- CoV-2, Influenza A, Influenza B, and RSV A/B and internal control (IC) gene.

Assay Features

- Simultaneous quantitative detection of SARS- CoV-2, Influenza A, Influenza B, and RSV A/B and internal control (IC) gene
- Extracted RNA samples from upper or lower respiratory tract can be used
- Ready-to-use master mixes

Specificity

- No detectable cross reactivity with any of the human coronavirus strains and other respiratory pathogens

Sensitivity

- Capable of detecting variants of concerns of SARS -CoV-2 including omicron
- Detection of very low viral loads as little as 0.6–5 copies/μl of viral RNA

Key Features

Sensitivity	100%
Specificity	100%
Processing time	1.5 hours
Compatibility	Real-time PCR Instruments with a minimum of 5 measurement channels (FAM, HEX, Texas Red, CY5.5 and CY5)
Validated in	Bio-Rad CFX96, Bio-Rad CFX Opus and Applied Biosystems QuantStudio 5
Shelf Life	12 months

Kit Content & Storage

Ready-to-use reagents (Storage at -20°C):

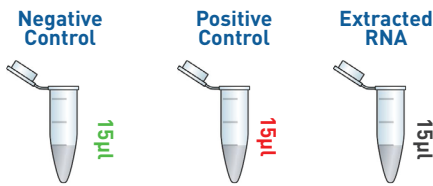
- Respiratory Reaction mix
- Respiratory Primer-Probe mix
- Respiratory Positive control
- Respiratory Negative control



Test Procedure and Result Interpretation

1 Sample Preparation

8µl of Reaction Mix + 2µl of Primer Probe Mix



Total Volume of 25µl in each tube

2 Real Time PCR

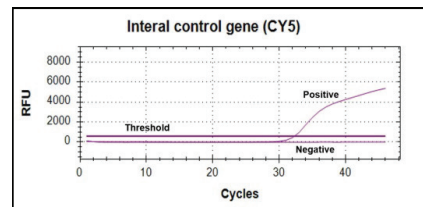
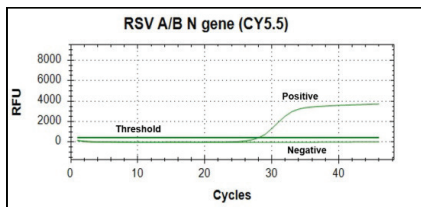
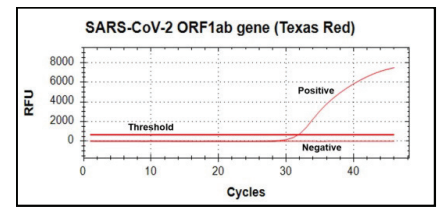
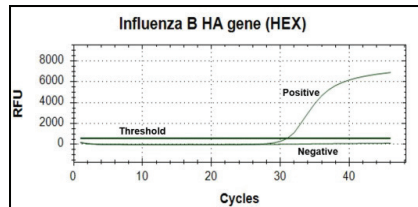
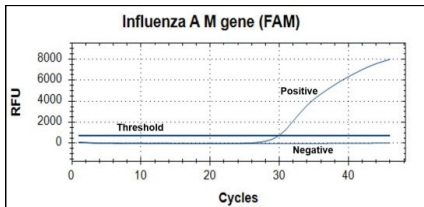
Temperature	Time	Cycles
45°C	20 min	1
95°C	3 min	1
95°C	15 sec	45
59°C	20-30 sec*	

Pathogen	Target Gene	Channel
SARS-CoV-2	ORF1ab	Texas Red
Influenza A	Matrix (M)	FAM
Influenza B	Hemagglutinin (HA)	HEX
RSV A/B	Matrix (M) / RNA Polymerase L (L)	CY5.5
Internal control	Human β-globin	CY5

Amplification protocol as per the instructions for use

* Elongation time depends on the instrument requirements

3 Real Time PCR Result Generation



4 Result Interpretation

Influenza A (FAM)	Influenza B (HEX)	SARS-CoV-2 (TEXAS RED)	RSV (CY5.5)	*IC (CY5)	Result Analysis
≤40	UNDET	UNDET	UNDET	≤38	Influenza A Positive
UNDET	≤40	UNDET	UNDET	≤38	Influenza B Positive
UNDET	UNDET	≤40	UNDET	≤38	SARS-CoV-2 Positive
UNDET	UNDET	UNDET	≤40	≤38	RSV Positive
UNDET	UNDET	UNDET	UNDET	≤38	Negative
UNDET	UNDET	UNDET	UNDET	UNDET	Invalid

- If more than one target has a Ct value below the determined cut off, the sample could be positive for those targets.
- Multiple infections are possible but rare.
- It is recommended to do the tests in replicates.

Product Code:

100 Reactions Kit	8100532
500 Reactions Kit	8100533



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