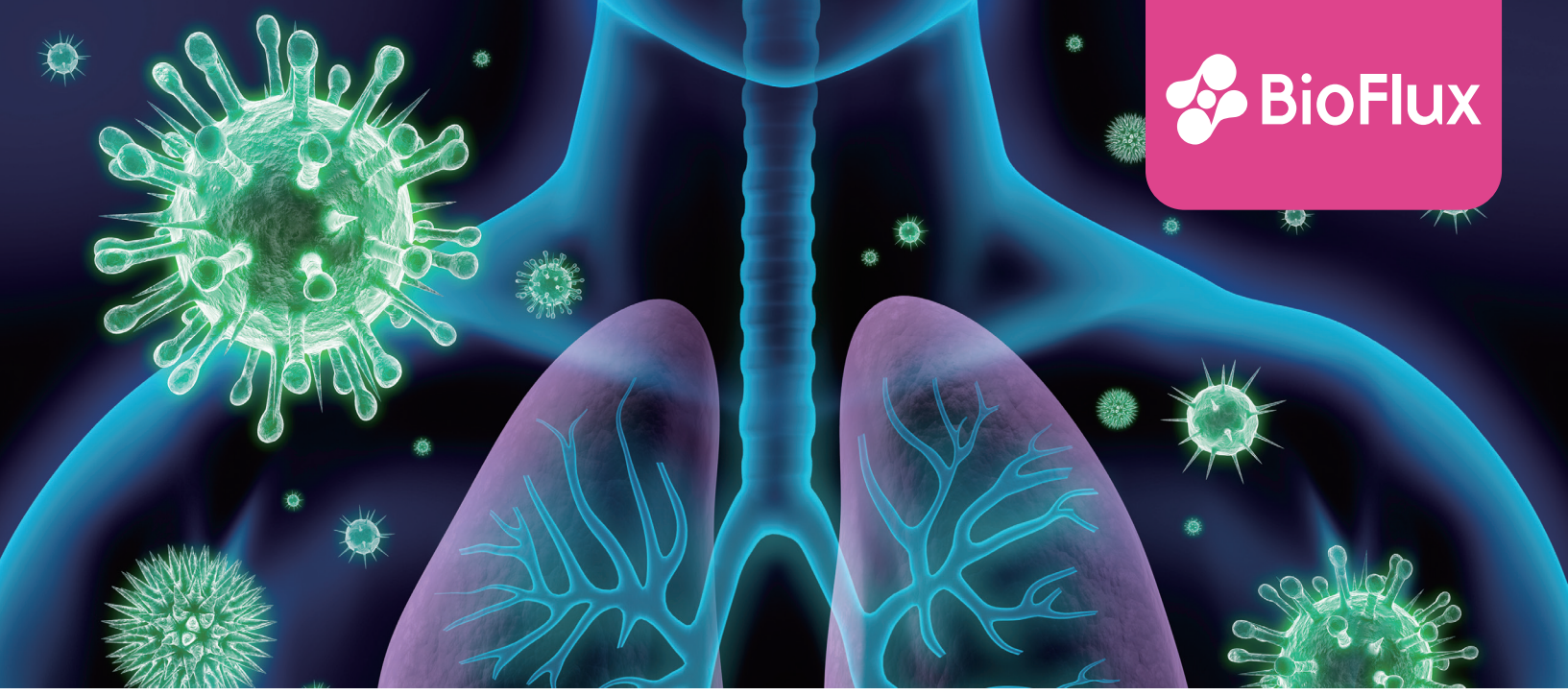

Respiratory Syncytial Virus / Adenovirus / Parainfluenza Virus Nucleic Acid Detection Kit (Fluorescence PCR)

Product Introduction

Respiratory Syncytial Virus (RSV) is a single-stranded RNA virus, spherical in shape, with particles 120-200 nm in size. It has one serotype, divided into subtypes A and B, and is a major cause of acute respiratory infections in children, transmitted via droplets and close contact.

Adenovirus (ADV) is a double-stranded DNA virus, with icosahedral symmetry and particles measuring 60-90 nm. It can be divided into seven subgroups (A-G), with subgroups B, C, and E causing respiratory tract infections, presenting symptoms like fever, cough, and nasal congestion.

Parainfluenza Virus (PIV) is a single-stranded RNA virus, spherical, 125-250 nm in diameter. It has four subtypes, with types 1, 2, and 3 causing respiratory infections in children and adults. Types 1 and 3 are particularly associated with outbreaks.

Currently, laboratory diagnostic methods for RSV, ADV, and PIV include virus isolation and culture, nucleic acid detection, antigen detection, and serological testing. This kit employs real-time fluorescent quantitative PCR technology based on TaqMan probes to specifically amplify pathogen nucleic acids. Simultaneously, the accumulation of fluorescent signals enables the interpretation of positive and negative results. Compared to the aforementioned methods, molecular diagnostics offer exceptionally high sensitivity, allowing for pathogen identification based on genetic sequence differences, early detection, and timely intervention to mitigate severe cases. This provides significant advantages in disease diagnosis and treatment.

Product Specifications

Parameters	Description
Sample Type	Oropharyngeal swab
Limit of Detection (LoD)	400 copies/mL
Target Pathogens	Adenovirus (FAM), Respiratory Syncytial Virus (HEX), Parainfluenza Virus (ROX)
Precision	The variation coefficient (CV) of within-day, between-day, within-batch and between-batch were less than 5%
Compatible Platform	Fluorescence Quantitative Detection System LineGene 9600 Plus (FQD-96A) , QuantGene 9600 (FQD-96C), Automatic PCR Analysis System (FQD-A1600), Thermofisher 7500 Real-Time PCR Systems
Recommended Extraction Kit	BSC86 MagaBio Plus Virus DNA/RNA Purification Kit III
Detection Time	35 min
Storage Condition	-20°C±5°C away from light

Product Features

- **Multiplex Detection:** 3 in 1 test for Respiratory Syncytial Virus (RSV), Adenovirus (ADV), Parainfluenza Virus (PIV).
- **Short Turnaround Time:** Results can be obtained in as little as 35 minutes.
- **Internal Control Included:** Incorporates an internal control to monitor the entire extraction and detection process, ensuring reliability and quality of the results.
- **Easy to Use:** qPCR is completed in a single step with fully enclosed amplification and detection, preventing aerosol contamination.

Application Cases

Case 1

Accuracy: Positive reference samples (P1-P14) and negative reference samples (N1-N8) from Respiratory Syncytial Virus, Adenovirus, and Parainfluenza Virus were processed according to the protocol using Bioer Technology extraction reagent BSC86S1E and then tested.

Results: The test accurately detects Respiratory Syncytial Virus, Adenovirus, and Parainfluenza Virus, with a 100% positive agreement rate and a 100% negative agreement rate.

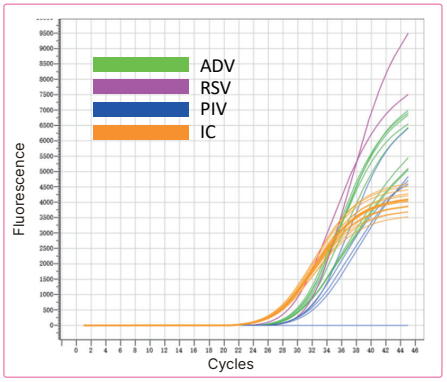

Figure 1: Accuracy of detecting positive and negative reference samples from the company's reference panel

Case 2

Sensitivity: The lowest detection limit reference samples (S1-S14) for Respiratory Syncytial Virus, Adenovirus, and Parainfluenza Virus were processed according to the protocol using Bioer Technology extraction reagent BSC86S1E and then tested.

Results: At the lowest detection limit, Respiratory Syncytial Virus, Adenovirus, and Parainfluenza Virus can be reliably detected.

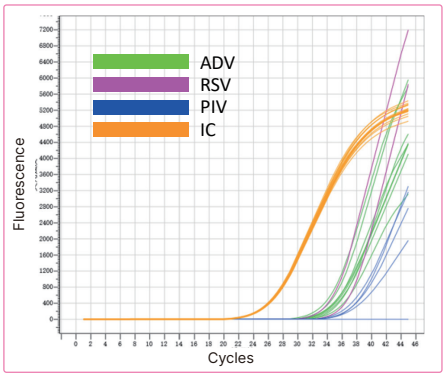

Figure 2: Sensitivity testing

Case 3

Precision: Precision reference samples (J1-J12) from Respiratory Syncytial Virus, Adenovirus, and Parainfluenza Virus were processed according to the protocol using Bioer Technology extraction reagent BSC86S1E, with each sample tested 10 times.

Results: Precision reference samples were tested, and the coefficient of variation (CV) was calculated. The results showed that the CV was less than 5% for all samples, indicating good precision of the reagent.

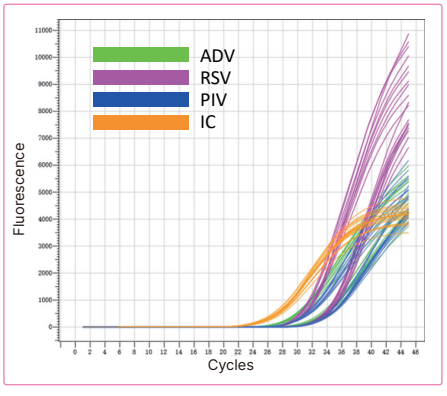

Figure 3: Precision testing of the company's reference samples

Ordering Information

Product Name	Cat. No.	Package
Respiratory Syncytial Virus / Adenovirus / Parainfluenza Virus Nucleic Acid Detection Kit (Fluorescence PCR)	BSJ45M1/BSJ45L1	48T/96T

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