



Core Enzymes for the Detection of  
SARS-COV-2 and other Viral Pathogens ——

# Hifair<sup>®</sup> V nCov Multiplex One Step RT-qPCR enzyme mix

# Core Enzymes for the Detection of SARS-COV-2 and other Viral Pathogens

As the COVID-19 pandemic continues to rage throughout the world, the demand for testing kits steadily increases. The availability of the testing kits, however, is often limited, which greatly impacts the effective control of the pandemic.

Empowered by our innovative enzyme modification technology, large-scale protein fermentation/purification technology, and highly-efficient antibody screening technology, Yeasen has been playing an important role in the battle against coronavirus by providing enzymes for the production of millions of testing kits in China.



Yeast's **Hifair® V nCov Multiplex One-Step RT-qPCR enzyme mix** combines three major enzymes in one tube and allows sensitive quantification of RNA templates, including RNA viruses. Reverse transcription and PCR amplification are carried out in the same tube, simplifying hands-on operations and reducing cross-contamination risks. The enzyme mix is highly resistant to common PCR inhibitors with enzymes engineered to be thermostable and are compatible with the UDG enzyme-based anti-contamination system. We also provide single-enzyme products for major components within the enzyme mix, namely the **Hifair® V Reverse Transcriptase**,

the **UNICON® HotStart Taq DNA Polymerase**, and the **Murine RNase inhibitor**. A ready-to-use reaction buffer is also available, which is optimized for the enzyme mix or the single-enzyme products.

Our UNICON® HotStart Taq DNA Polymerase is an antibody modified enzyme whose activity is blocked at room temperature and will only be restored after the antibodies are denatured and dissociate from the polymerase during the initial denaturation step of the PCR. This technology ensures high specificity and sensitivity of the PCR reactions, effectively reduces false positives and allows room-temperature reaction setup.

## ► Hieff Unicon® Hotstart Taq DNA Polymerase exhibits high sensitivity and specificity

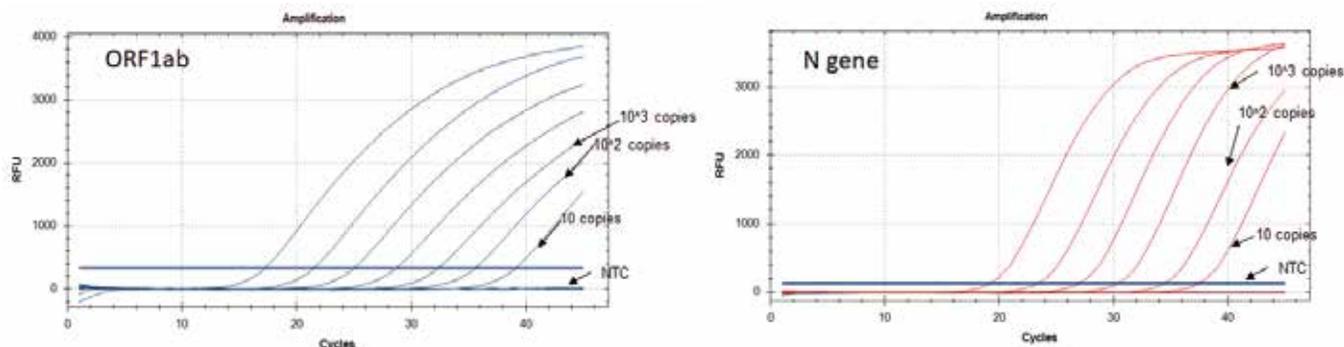
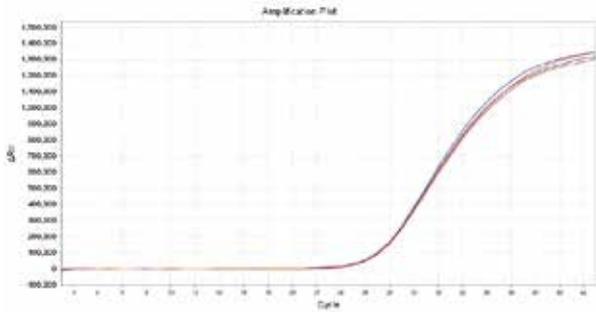


Figure1. Amplification curve of ORF1ab and E gene using Hieff Unicon® Hotstart Taq DNA Polymerase

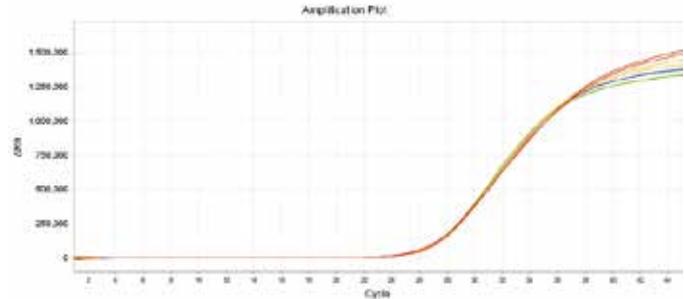
► Hieff Unicon® Hotstart Taq DNA Polymerase exhibit excellent stability



\* Figure2. Amplification curve of 10,000 copies of ASF plasmid using Hieff Unicon® Hotstart Taq DNA Polymerase. The blue curve represents the amplification after the reaction was setup and the complete mastermix was stored at 4°C for 10 days, and the red curves represent the amplification after the reaction was setup and the complete mastermix was stored at 4°C for 0 day

\*Figure3. Amplification curve of 10,000 copies of ASF plasmid using Hieff Unicon® Hotstart Taq DNA Polymerase.

- Amplification curve after the reaction was setup and the complete mastermix was stored at 37°C for 5 days;
- Amplification curve after the reaction was setup and the complete mastermix was stored at 37°C for 3 days;
- Amplification curve after the reaction was setup and the complete mastermix was stored at 37°C for 1 day;
- Amplification curve after the reaction was setup and the complete mastermix was stored at 37°C for 0 day.



Our featured products related to COVID-19 diagnostics

| Applications                   | Product Name   | Catalog No. |
|--------------------------------|--|-------------|
| DNA direct amplification       | Hieff UNICON® HotStart Direct Taq DNA Polymerase     | 10717ES     |
| DNA amplification              | Hieff UNICON® HotStart Taq DNA Polymerase            | 10729ES     |
| Double-Block anti-Taq antibody | Hieff® Double-Block anti-Taq DNA Polymerase Antibody | 31303ES     |
| Anti-Taq antibody              | Hieff® anti-Taq DNA Polymerase Antibody              | 31301ES     |
| Reverse Transcription          | Hifair® V Reverse Transcriptase                      | 11300ES     |
| RNase inhibitor                | Murine RNase inhibitor                               | 10603ES     |
| UDG/UNG                        | Uracil DNA Glycosylase (UDG), heat-labile            | 10303ES     |
| LAMP                           | Bst II DNA polymerase                                | 12908ES     |

YEASEN has a production capacity of up to 800L per batch of fermentation, and our daily production of core enzymes for Covid testing kits can enable the diagnostics of 1 million people. All our production processes are performed under stringent quality controls to eliminate batch-to-batch variation. With our adequate inventory, we can continuously provide you the products you need at reasonable prices! Contact us to learn more about our products and to get **free samples** to test out! (Please kindly note that YEASEN will not cover the shipping fees.)



Visit our official website: [www.yeasen.com](http://www.yeasen.com) for more information...

## OUR MISSION

Contribute to the advancement of life sciences  
Be the best enzyme company

## OUR VISION

Focus on the industrialization of molecular biology enzymes  
Promote the development of the health industry  
Benefit people worldwide

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