

## PRIME RespDetect™ RAPID RESPIRATORY PATHOGEN TEST



### PRODUCT BROCHURE

#### **Molecular Rapid Screening test for the detection of SARS-CoV-2, Influenza A / B, RSV A / B**

Prime RespDetect™ targets Orf1, Nucleocapsid(N) and Envelope (E) viral genes in SARS-CoV-2 and can detect all known strains of COVID including Alpha, Beta, Gamma, Delta and Mu.

Prime RespDetect™ targets Influenza (A and B) and has been tested to work on all major strains of Influenza. Prime RespDetect™ also targets Respiratory Syncytial Virus (RSV A & RSV B).

Extractionless isothermal amplification is massively scalable and can be fully automated for laboratories. Prime RespDetect™ test is validated with multiple controls and samples.

## PRODUCT DESCRIPTION

Prime RespDetect™ Rapid Screening Test detects SARS-CoV-2 including all known strains of COVID, Influenza (A/B) and RSV (A/B) with high sensitivity and specificity.



### OVERVIEW

- Go from sample to result results in <45 min
- Very high analytical sensitivity and analytical specificity in detecting SARS-CoV-2
- Very high throughput capable of running >3,000 samples per technician per machine on a 8 hour shift (\* assuming thermal cycler with 4 x 384 capacity)
- Isothermal and extractionless protocol is easier to set up for screening

#### DECREASED RUN TIME

- Extractionless isothermal amplification produces results in <45 minutes compared to ~120 minutes for PCR.

#### HIGH ACCURACY

- Validated against multiple strains of SARS-CoV-2, Influenza and RSV and shows high specificity and sensitivity.
- High inclusivity for all major strains of Influenza A/B with no cross reactivity between Influenza A & B, which shows detection with very high specificity.

#### SUPPORTS PCR MACHINES

- Supports multiple qPCR instruments and thermal cyclers / plate readers.

#### INCREASES REVENUE

- Increases lab throughput as high as 4x and increases billable revenue.

## RT-LAMP TECHNOLOGY

Prime RespDetect™ utilizes Reverse-Transcription Loop-mediated isothermal Amplification (RT-LAMP) and eliminates the need for RNA extraction.

### 1. ANALYSIS

- RT-LAMP analyzes genetic material faster than PCR and can be detected by fluorescence output.
- Amplification of genetic material is rapid under isothermal conditions, which eliminates need for heating and cooling like PCR.

### 2. HIGH SPECIFICITY

- RT-LAMP recognizes the target genes using six target sequences compared to just 2 target sequences in PCR which makes it more specific.
- Prime RespDetect™ targets three viral genes (18 target sequences) of SARS-CoV-2, and unique regions in Influenza (A/B) and RSV (A/B), which leads to high specificity.

### 3. HIGH QUALITY DETECTION

- Prime RespDetect™ recognizes the target viral genes emitting strong fluorescence for high quality detection with fluorescence readers.

### 4. TIME

- Prime RespDetect™ does not require RNA extraction or thermal cycling, which allows for rapid amplification.
- PCR can require >2 hours while Prime RespDetect™ produces results from sample in <30 minutes.

## PRODUCT PORTFOLIO AND FEATURES

### 1. PRODUCT OFFERINGS

- **Prime CovidDetect™**  
Highly accurate, extractionless rapid RT-LAMP, COVID screening assay which requires <30 min from sample to result.
- **Prime STIDetect™**  
LAMP and PCR based detection assay for STIs (Herpes, Hepatitis B/C, Chlamydia, Gonorrhea, *Candida Albicans*, *Trichomonas*, Syphilis, etc.)
- **Prime VarDetect™**  
Highly accurate, rapid PCR assay for detection of Covid Variants including: Alpha, Beta, Gamma, Delta, and Mu.
- **Prime VarDetectNGS™**  
A rapid Illumina NGS assay for full genome SARS-CoV-2 sequencing supporting rapid turnaround times and small batch sizes up to 25 samples.

### 2. PRIME'S ADVANTAGES

#### High Innovation:

- Highly innovative Rapid LAMP and PCR assays for multiple microbes.
- Our team works with you to design and develop novel assays within 3-4 weeks.

#### Customization:

- Highly reliable assays that can be customized to your lab workflows.
- Our specialists work with your team during the entire process for successful execution of the assays.

### 3. PARTNERSHIPS

- Partners with academic institutions including NYU, UPenn and University of Alaska.
- Test kits have been validated in multiple labs in NY, CA, New Orleans, NC and PA.
- Partners with multiple labs including Summer Bio, VeroDx, HookDx, Unilab, Biolabs, SepsisMD and DNA Healthcare Solutions.

### 4. US SUPPLY CHAIN

- Partners with US ISO certified CMOs and has multiple reagent suppliers for its reagents.
- Can accommodate turnaround time of less than two weeks.
- One day shipping is available in US based on reagent availability.
- Bulk reagent supply ready to order.