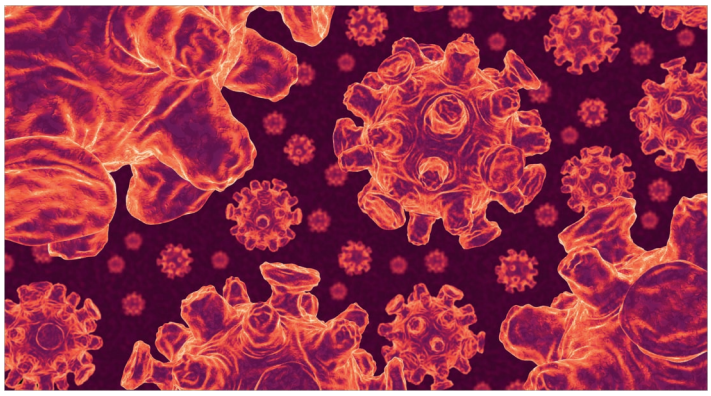
VereFlu™

veredus laboratories

Detects, Differentiates and Identifies:
Influenza A: H1, H3, H5, H7, H9 with subtype ID's of **H1N1, H3N2, H5N1** and **H9N2** and **Influenza B**



The threat of an influenza pandemic propels the need of a fast and reliable test for the detection of seasonal human influenza, with the capability to identify and differentiate flu subtypes.

In patients with suspected pandemic flu, rapid identification of patients who will develop severe symptoms is critical for effective management and positive outcome. When used on patients at the earliest stages of disease, these tests will have prognostic value, rapidly identifying those who are suffering from seasonal flu from those who are suffering from pandemic flu. This will lead to better resource management through more efficient allocation of limited supplies of vaccines, diagnostic tests, hospital beds, quarantine facilities, as well as manpower in terms of health care workers.

Robust and Time-tested Technologies: Polymerase Chain Reaction (PCR) and microarray, provide the VereFlu™ chip the accuracy and sensitivity needed to provide answers in the shortest possible time.

Breakthrough Innovation: The integration of two powerful molecular biological technologies enables the development of the VereFlu™ chip into a fast PCR-microarray based diagnostic test using the VereID™ Biosystem to simultaneously detect, differentiate and identify selected biological agents all in a single test.

With the flexibility afforded by our customisable updates in our VereChip™ target panels, we are able to provide diagnostic and surveillance tools needed today and be ready for the next threat tomorrow. Veredus Laboratories, the future of diagnostics and surveillance, today.

Advantages

- Multiple diagnostic tests on one chip
- Precise
- Ultra Fast
- Customisable
- Portable and easy-to-use
- Multiple security features for each chip
- Able to identify drug resistant strains as well as high or low pathogenic strains
- Provides full spectrum flu surveillance
- Enables prompt action by healthcare authorities to control flu epidemics or even pandemics
- Ability to detect mutated flu strains due to multiple probes per target
- Probes can be updated quickly to include new mutations of evolving flu strains and ensure wider coverage of detection

VereFlu™

Specifications

- Detects H1, H3, H5, H7 and H9 (with specific identification of H1N1, H3N2, H5N1 and H9N2) and Influenza B
- Multiple Probes (with duplicates) for:
  a. Identification of Influenza A type (type probes for H1, H3, H5, H7, H9)
  b. Identification of specific Influenza A subtypes (specific probes for subtypes: H1N1, H3N2, H5N1, H9N2)
  c. Identification of newly emergent Influenza A
  d. Additional identification of H5N1 using specific probes
  e. Identification of Influenza B
- Process controls on each chip:
  a. PCR: Positive and Negative Controls
  b. Hybridisation: Orientation and Hybridisation Probes
- Specificity: 99%
- Limit of Detection: 100 copies of RNA
- Sample Types: Blood, serum and respiratory swabs (nasopharyngeal, throat, nasal or throat aspirates)
- Every chip is bar-coded, and measures 2.54cm x 7.62cm

Features

- Able to run multiplex amplification reactions
- Multiple probes per target ensures reliable detection of subtypes in every test
- Small sample volume requirement
- Fast and programmable temperature ramp rate
- Fully customisable PCR protocol
- Scalable for high throughput
- PCR yield is comparable to standard thermal cyclers
- 40% faster than conventional thermal cyclers
- Functional validation of PCR is provided by an internal positive control
- Functional validation of hybridization for each assay is provided by an internal positive hybridization control
- Proprietary microfluidic interface: contact surfaces are biocompatible and do not inhibit the PCR reaction
- Short time required for fluidic operations

VereID™ Biosystem

VereID™ Biosystem combines molecular biology, microfluidics and microelectronics to bring the future of diagnostics and surveillance to you today. The VereID™ Biosystem, along with the VereChip™, is a breakthrough in innovation, integrating two powerful molecular biological technologies: PCR and Microarray.

VereID™ Biosystem includes the following components:

1. Temperature Control System
2. Optical Reader
3. Biosystem Software
4. Bar Code Reader

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