

Thermo Fisher Scientific Launches Ion AmpliSeq SARS-CoV-2 Insight Research Assay for SARS-CoV-2 Surveillance

Panel enables early identification of new and known variants from a variety of sample types

CARLSBAD, Calif., June 7, 2021 /PRNewswire/ -- Thermo Fisher Scientific today introduced the [Ion AmpliSeq SARS-CoV-2 Insight Research Assay](#) to improve SARS-CoV-2 surveillance. The assay is designed to enable early identification of new and known variants from samples that have lower viral loads. By sequencing more than 99 percent of the SARS-CoV-2 genome, the assay covers all potential serotypes.

The new Ion AmpliSeq SARS-CoV-2 Insight Research Assay broadens and improves local, regional and national surveillance efforts to discover emerging SARS-CoV-2 variants through highly sensitive next-generation sequencing (NGS). Combined with Thermo Fisher's NGS technology, the panel enables researchers to obtain epidemiological insights with rapid turn-around time, workflow automation and seamless informatics and data uploading to public SARS-CoV-2 data repositories.

"RNA viruses such as SARS-CoV-2 mutate at high rates in response to selective environmental pressures, requiring labs and vaccine developers to monitor mutations diligently," said Andy Felton, vice president of clinical next generation sequencing at Thermo Fisher. "Higher sensitivity next-generation sequencing assays are needed to identify mutations earlier in both symptomatic and asymptomatic individuals to help public health officials and labs globally track the spread of new and known variants for public health decisions and guidance locally."

Optimized to run on the [Ion GeneStudio S5 System](#),* the assay includes 237 amplicons specific to SARS-CoV-2, with the addition of variant-tolerant primers for emerging variants. The increased sensitivity of this assay will empower researchers to sequence the complete genome and discover new variants from a variety of sample types including nasopharyngeal and shallow nasal swabs, saliva and others, and with cycle threshold (Ct) values higher than 28, or as low as 50 viral copies.

"Our lab has been sequencing positive COVID-19 samples since the fall, and recently announced a partnership with the Centers for Disease Prevention (CDC) to enhance national surveillance of known and emerging variants," said Josh Arant, chief operating officer of MAKO Medical Labs. "Supporting the increased scale of our sequencing program, the new, highly sensitive assay allows us to quickly report back valuable insights on SARS-CoV-2 variants to inform public health professionals across the country."

"As one of the labs currently sequencing positive SARS-CoV-2 samples as part of the International Travel Testing Programme, we need precise and comprehensive sequencing technology that can help us understand which mutations are present in positive samples for effective monitoring of SARS-CoV-2 cross-border transmission," said Marco Loddo, Ph.D., BSc, co-founder and scientific director at Oncologica. "The new assay offers fast improvement on the sensitivity for lower titer samples, including those from asymptomatic individuals, and has been brilliant for the discovery of emerging variants of concern entering the UK."

For more information, visit www.thermofisher.com/sarscov2insight

Assay for Genexus System Coming Soon

To further expedite NGS analysis of SARS-CoV-2 and to help meet growing customer demand, Thermo Fisher has begun optimizing the Ion AmpliSeq SARS-CoV-2 Insight Research Assay for the [Ion Torrent Genexus System](#).* [Launched in November 2019](#), the company's newest sequencing platform automates the entire targeted NGS workflow and can deliver specimen to report economically in just one day. Optimization and validation of the research assay on the Genexus System is now underway in collaboration with Thermo Fisher customers.

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