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Thermo Fisher unveils assay to improve SARS-CoV-2 surveillance

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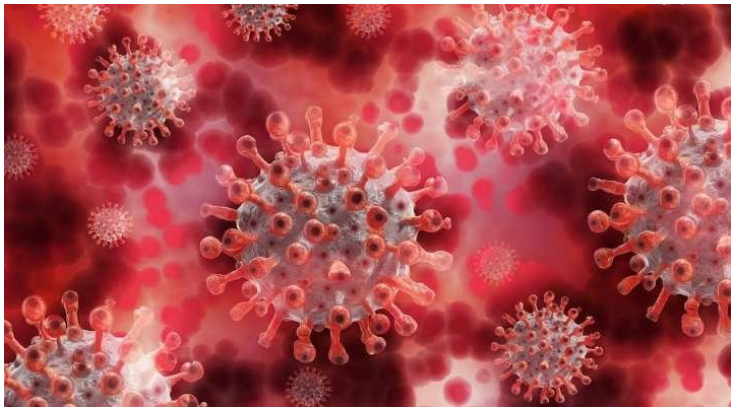
To discover emerging SARS-CoV-2 variants through highly sensitive next-generation sequencing



Thermo Fisher Scientific has 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.

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 nasophyrengeal and shallow nasal swabs, saliva and others, and with cycle threshold (Ct) values higher than 28, or as low as 50 viral copies.

"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."