

Thermo Fisher expands Oncomine portfolio, 4/18

April 2018—Thermo Fisher Scientific has expanded its Oncomine portfolio with two assays for liquid biopsy and immuno-oncology for clinical research. The company also announced its next-generation Ion AmpliSeq HD technology.

The Ion Torrent Oncomine Pan-Cancer Cell-Free Assay enables reproducible detection and analysis of tumor DNA and RNA across all major classes of somatic mutations (SNVs, indels, CNVs, and fusions) from a single vial of blood, with as little as 1 ng of nucleic acid input, within two days. Targeting more than 50 genes across multiple cancer types, including lung, colorectal, breast, pancreatic, thyroid, and others, the cell-free total nucleic acid assay is the broadest developed by Thermo Fisher for liquid biopsy clinical research applications.

The Ion Torrent Oncomine Tumor Mutation Load Assay is based on a set of 409 genes that can be sequenced using as little as 20 ng of formalin-fixed, paraffin-embedded DNA and is designed to improve potential selection strategies for immune therapy clinical trials. Along with the Ion AmpliSeq Immune Repertoire Assay Plus, TCR beta, which helps identify population subsets predisposed to immune-mediated adverse events, and the Oncomine Immune Response Research Assay, which characterizes gene expression in tumor microenvironment for immune response pathways, the assays aim to offer a complete suite of solutions for immuno-oncology clinical research.

Both new assays integrate with Ion Torrent sample preparation, targeted sequencing, and downstream bioinformatics and reporting tools. When combined with the Ion GeneStudio S5 Series instruments, the entire offering aims to provide clinical researchers a set of comprehensive, cost-effective, and rapid sample-to-answer tools for their lab.

Ion AmpliSeq HD technology is a next-generation core chemistry that can achieve increased detection sensitivity of ≤ 0.1 percent mutant allele fractions in blood samples and enables clinical researchers to create custom-design cfDNA panels with maximum flexibility. The technology will be equally applicable to FFPE samples and will extend the benefits of heightened sensitivity beyond what is currently available. Workflow improvements include a library preparation time of less than three hours.

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