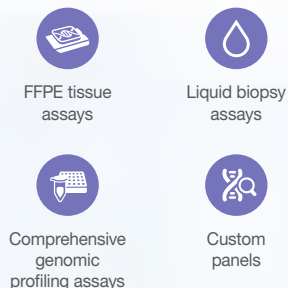


Solid tumor genomic profiling



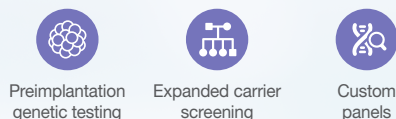
Hematology-oncology research NGS testing



NGS testing for other research applications



Reproductive health research NGS solutions



Comprehensive NGS testing solutions

Our broad range of kitted assays and custom panels is available to support your NGS testing needs

Thermo Fisher Scientific offers a wide variety of optimized kitted assays and custom NGS panels that are used by clinical researchers and laboratory technicians to perform targeted NGS tests on Ion Torrent™ NGS platforms, Ion GeneStudio™ systems, and the Ion Torrent™ Genexus™ System.

Our menu includes NGS tests for cancer research, reproductive health research, inherited disease research, infectious disease

and microbial research, and more, as well as custom Ion AmpliSeq™ panels and services.

These NGS tests are sensitive and easy to implement for laboratory use, and many assays come with available automation, bioinformatics, and reporting mechanisms to enable specimen-to-report results in as little as 24 hours.

 Learn more at thermofisher.com/iontorrent

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ion torrent

Solid tumor genomic profiling assays—FFPE tissue

Product	Description	Instrument	Size	Cat. No.
Oncomine Precision Assay	Fast, targeted genomic profiling across 50 genes that enables hands-free detection of key biomarkers in as little as 24 hours; compatible with FFPE specimens	Genexus System	16 samples (DNA and RNA) 32 samples (DNA only or RNA only)	A46291
Oncomine Comprehensive Assay Plus	Comprehensive genomic profiling across >500 genes, plus genomic signatures like tumor mutational burden (TMB), microsatellite instability (MSI), and homologous recombination deficiency (HRD)	Ion GeneStudio systems	24 samples 32 samples	A48577 (manual, 24 samples, DNA and RNA) A48578 (manual, 24 samples, RNA) A49667 (automated, 32 samples, DNA and RNA) A49671 (automated, 32 samples, RNA)
		Genexus System	16 samples (DNA and RNA, DNA only) 24 samples (RNA only)	A47013 (DNA and RNA) A47015 (DNA) A47016 (RNA)
Oncomine Comprehensive Assay v3	Detects SNVs, CNVs, gene fusions, and indels from 161 genes across solid tumors in one streamlined workflow	Ion GeneStudio systems	24, 32, 96 samples	A35805 (manual, 24 samples) A35806 (automated, 32 samples) A36111 (manual, 96 samples)
		Genexus System	16 samples (DNA and RNA)	A46296
Oncomine Focus Assay	Enables simultaneous detection of hundreds of variants across 52 genes relevant to solid tumors; compatible with FFPE fine needle aspirates and core needle biopsies	Ion GeneStudio systems	16 samples 32 samples	A35957 (manual, 16 samples) A42008 (automated, 32 samples)
Oncomine BRCA Research Assay	100% exonic coverage of <i>BRCA1</i> and <i>BRCA2</i> genes, large indels, and exon or whole-gene deletion or duplication	Ion GeneStudio systems	24 samples 32 samples	A32840 (manual, 24 samples) A32841 (automated, 32 samples)
Oncomine BRCA Assay GX		Genexus System	32 samples	A47912
Oncomine tumor-specific panels	Focused predesigned and customizable cancer research panels with content relevant for clinical research including a predesigned homologous recombination repair (HRR) panel	Ion GeneStudio systems	24, 96, 384 samples (manual) 32, 128 samples (automated)	Order at ampliseq.com

Solid tumor genomic profiling assays—liquid biopsy

Product	Description	Instrument	Size	Cat. No.
Oncomine Precision Assay	Fast, targeted genomic profiling across 50 genes that enables hands-free detection of key biomarkers in as little as 24 hours; compatible with liquid biopsy specimens	Genexus System	32 samples (cell-free total nucleic acid)	A46291
Oncomine Colon cfDNA Assay	Plasma analysis of cell-free DNA (cfDNA) for colon cancer-related variants (SNVs/indels) across 14 genes	Ion GeneStudio systems	8 samples	A31182
Oncomine Breast cfDNA Research Assay v2	Plasma analysis of cfDNA for breast cancer-related variants across 12 genes, including SNVs, CNVs, and high coverage of TP53	Ion GeneStudio systems	8 samples	A35865
Oncomine Lung Cell-Free Total Nucleic Acid Research Assay	Plasma analysis of cfDNA and cell-free RNA (cfRNA) across 14 lung cancer-related genes covering SNVs, indels, CNVs, and fusions	Ion GeneStudio systems	8 samples	A35864
Oncomine Pan-Cancer Cell-Free Assay	Plasma analysis of cfDNA across 52 genes to evaluate SNVs, indels, CNVs, and fusions for multiple tumor types	Ion GeneStudio systems	8 samples	A37664

Hematology-oncology research assays

Product	Description	Instrument	Size	Cat. No.
Oncomine Myeloid Research Assay	Profiling of multiple relevant driver genes associated with myeloid malignancies	Ion GeneStudio systems	24, 32 samples	A36940 (manual, 24 samples) A36941 (automated, 32 samples)
Oncomine Myeloid Assay GX v2		Genexus System	32 samples	A50694 (DNA and RNA) A50753 (DNA) A50754 (RNA)
Oncomine Myeloid MRD Assay (RUO)	Detect important myeloid measurable residual disease (MRD) biomarkers with high sensitivity (limit of detection down to 0.05% allele frequency); available in a DNA or RNA assay	Ion GeneStudio systems	24 samples	A53838 (DNA) A53839 (RNA)
Ion AmpliSeq Liverpool Lymphoid Network Panel	Comprehensive coverage of key biomarkers (including <i>NOTCH1</i> 3'UTR) applicable for the study of a range of lymphoid neoplasms, including both B and T cell lymphomas	Ion GeneStudio systems Genexus System	Custom order	Order at ampliseq.com
Ion AmpliSeq Liverpool MPN Panel	Categorization of myeloproliferative neoplasm (MPN) samples covering the canonical MPN mutations in <i>JAK2</i> , <i>MPL</i> , and <i>CALR</i> genes and key targets in 22 additional genes (including <i>FLT3</i> , <i>IDH1</i> , and <i>IDH2</i>)	Genexus System	Custom order	Order at ampliseq.com
Oncomine Childhood Cancer Research Assay	Comprehensive genomic profiling of childhood and young-adult cancer samples	Ion GeneStudio systems	24, 32 samples	A36485 (manual, 24 samples) A36486 (automated, 32 samples)
Oncomine BCR Pan-Clonality Assay	Profiling of multiple B cell receptor targets (IGH, IgK, IgL, KDE, c-intron) for clonality and MRD assessment with a single assay	Ion GeneStudio systems	24, 96 samples	A51559 (24 samples) A51547 (96 samples)
Oncomine TCR Pan-Clonality Assay	Profiling of multiple T cell receptor targets (TCRB, TCRG) for clonality and MRD assessment with a single assay	Ion GeneStudio systems	24 samples	A51562
Oncomine BCR IGHV Leader-J Assay	Accurate measurement of somatic hypermutation across the <i>BCR IGHV</i> gene	Ion GeneStudio systems	24 samples	A51563

Immuno-oncology research assays

Product	Description	Instrument	Size	Cat. No.
Oncomine Comprehensive Assay Plus	Comprehensive genomic profiling across >500 genes, plus key immuno-oncology research biomarkers like TMB, MSI, and HRD	Ion GeneStudio systems	24, 32 samples	A48577 (manual, DNA and RNA) A48578 (manual, RNA) A49667 (automated, DNA and RNA) A49671 (automated, RNA)
Oncomine Tumor Mutation Load Assay	Quantitative assessment of TMB	Ion GeneStudio systems	24, 32 samples	A37909 (manual, 24 samples) A37910 (automated, 32 samples)
Oncomine BCR IGH LR Assay, RNA	Comprehensive coverage of the B cell receptor (BCR) immunoglobulin heavy (IgH) chain	Ion GeneStudio systems	24 samples	A45485
Oncomine BCR IGH SR Assay	Identify and measure clonal expansion of B lymphocytes through targeting of the highly diverse complementarity-determining region 3 (CDR3) of the B cell receptor (BCR) immunoglobulin heavy (IgH) chain	Ion GeneStudio systems	24 samples	A45483 (DNA) A45484 (RNA)
Oncomine TCR Beta-LR Assay	Measurement of T cell diversity and clonal expansion from all regions of the T cell beta chain, i.e., CDR1, 2, and 3	Ion GeneStudio systems	24 reactions	A35386
		Genexus System	32 samples	A46297
Oncomine TCR Beta-SR Assay	Identification of T cell clones; measurement of clonal expansion from CDR3 of the T cell beta chain	Ion GeneStudio systems	24 samples	A39072 (DNA) A39359 (RNA)
Oncomine Immune Response Research Assay	400-gene assay covering gene expression of tumor-immune system interactions	Ion GeneStudio systems	32 samples	A32881 A32928
Oncomine TCR Pan-Clonality Assay	Predicting immunotherapy response and adverse events through next-generation sequencing of peripheral blood T cell repertoires	Ion GeneStudio systems	24 samples	A51562

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Reproductive health research NGS solutions

Application	Product	Description	Instrument	Size	Cat. No.
Preimplantation genetic testing	Ion ReproSeq PGS Kit	End-to-end NGS workflow for rapid and reliable aneuploidy analysis (PGT-A)	Ion GeneStudio systems	64 samples	A34899 Kit with Ion 510 chips (16 samples/run)
				96 samples	A34900 Kit with Ion 520 chips (24 samples/run)
				384 samples	A34901 Kit with Ion 530 chips (96 samples/run)
	Ion ReproSeq PGT-A GX5 Kit		Genexus System	192 samples	GX34902
				384 samples	GX34903
	Ion AmpliSeq Polyploidy Panel Kit	Leverages SNP-based assessments for accurate quality controls in preimplantation genetic testing for aneuploidy (PGT-A)	Ion GeneStudio systems	480 samples	GS45690
				80 samples	GS45691
	PGD-SEQ kits	Gene panels to research the embryo sample status of >500 common and rare monogenic/single-gene disorders (PGT-M)	Genexus System	384 samples	GX55689
				Up to 15 samples	BA03784 (Spinal muscular atrophy) BA03800 (Cystic fibrosis) BA03803 (Osteogenesis imperfecta) BA03816 (Fragile X Syndrome) BA03820 (Beta-thalassemia) BA03864 (Alpha-thalassemia) Growing menu of >500 panels; visit thermofisher.com/pgdseq
Expanded carrier screening	CarrierSeq ECS Kit	Rapid and cost-effective 420-gene NGS panel targeting the full coding region of all genes and enabling the analysis of >36,000 non-benign ClinVar variants for SNVs, indels, and CNVs	Ion GeneStudio systems	24 samples	A48022 Kit with Ion 530 chips (3 samples/chip)
				96 samples	A43585 Kit with Ion 530 chips (4 samples/chip)
				120 samples	A48023 Kit with Ion 540 chips (15 samples/chip)
				384 samples	A43586 Kit with Ion 540 chips (16 samples/chip)
Custom assays	Ion AmpliSeq on-demand panels	Customizable content from >5,000 lab-tested genes for targeted sequencing covering broad research areas for germline analysis and newborn screening research	Ion GeneStudio systems	24, 96 samples (manual) 8, 32 samples (automated)	Order at ampliseq.com
				16 samples (32 barcodes) 24 samples (48 barcodes)	
	Ion AmpliSeq made-to-order panels	For maximum flexibility, use the Ion AmpliSeq Designer tool to design and create customized Ion AmpliSeq panels to meet your needs	Ion GeneStudio systems	Custom order	Order at ampliseq.com

Infectious disease and microbiology research NGS assays

Application	Product	Description	Instrument	Size	Cat. No.
Antimicrobial resistance	Ion AmpliSeq Antimicrobial Resistance Research Panel	Sensitive, user-friendly method to assess AMR diversity across 478 antimicrobial resistance genes	Ion GeneStudio systems	Custom order	Order at ampliseq.com
Viral genome sequencing	Ion AmpliSeq Ebola Research Panel	Designed to detect Ebola virus with >99% genome coverage	Ion GeneStudio systems Genexus System	Custom order	Order at ampliseq.com
SARS-CoV-2 genome sequencing	Ion AmpliSeq SARS-CoV-2 Insight Research Assay	Designed to detect SARS-CoV-2 with >99% genome coverage; complete workflow from biological sample to sequencing report, even for low viral load samples	Ion GeneStudio systems	96 samples, manual	A51305
				32 samples, automated	A51306
			Genexus System	32 samples	A51307
Bacterial typing/ pathogen response	Ion AmpliSeq TB Research Panel	Rapidly identifies mutations related to MTB drug susceptibility	Ion GeneStudio systems Genexus System	Custom order	Order at ampliseq.com
	Ion AmpliSeq Pan-Bacterial Research Panel	Rapidly identifies bacteria and genes against 31 different antibiotic classes	Ion GeneStudio systems	Custom order	Order at ampliseq.com
	Ion 16S Metagenomics Kit	Rapid, comprehensive, and broad-range analyses of mixed microbial populations	Ion GeneStudio systems	100 samples	A26216
Microbiome analysis	Ion AmpliSeq Microbiome Health Research Assay	Accurate metagenomic studies and biomarker research on gut flora from stool samples	Ion GeneStudio systems	48 samples 256 samples 384 samples	A46495 A46496 A46497
Custom assays	Ion AmpliSeq made-to-order panels	For maximum flexibility, use the Ion AmpliSeq Designer tool to design and create customized Ion AmpliSeq panels to meet your needs using your own reference sequence	Ion GeneStudio systems Genexus System	Custom order	Order at ampliseq.com

Inherited disease research and other NGS assays

Method	Product	Description	Instrument	Size	Cat. No.
Whole-exome sequencing	Ion AmpliSeq Exome RDY Kit	The Ion AmpliSeq Exome RDY Kit enables the fastest and simplest method of exome enrichment, now even easier with oligo pools for ultrahigh-multiplex PCR exome enrichment dried down in a 96-well plate	Ion GeneStudio systems	8 reactions	A38262
Transcriptome analysis	Ion AmpliSeq Transcriptome Human Gene Expression Kit	The Ion AmpliSeq Transcriptome Human Gene Expression Kit enables the simultaneous measurement of the expression levels of more than 20,000 human RefSeq genes in a single assay	Ion GeneStudio systems	24 samples (manual) 96 samples (manual) 384 samples (manual) 32 samples (automated)	A26325 A26326 A26327 A31446
Custom assays	Ion AmpliSeq community panels	Ion AmpliSeq community panels are designed with input from leading disease researchers, verified for performance, and fully customizable to help meet your unique project requirements; popular community panels support clinical research in breast and ovarian cancer, cardiac disease, inherited cancer, primary immune deficiency, pulmonary disease, dementia, and pharmacogenomics research	Ion GeneStudio systems Genexus System	Custom order	Order at ampliseq.com
	Ion AmpliSeq on-demand panels	Build custom panels from more than 5,000 pretested genes that are most relevant in the research of inherited diseases—these include hereditary cancer, primary immunodeficiency, hearing loss, muscular dystrophy, and many more	Ion GeneStudio systems Genexus System	24, 96 samples (manual) 8, 32 samples (automated) 16 samples (32 barcodes) 24 samples (48 barcodes)	Order at ampliseq.com
	Ion AmpliSeq made-to-order panels	For maximum flexibility, use the Ion AmpliSeq Designer tool to design and create customized Ion AmpliSeq panels to meet your needs	Ion GeneStudio systems Genexus System	Custom order	Order at ampliseq.com

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