

# Product selection guide | Ion GeneStudio S5 Systems



<b>Select targets</b>	<b>Construct library</b>	<b>Prepare template</b>	<b>Run sequence</b>	<b>Analyze data</b>
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Application	Products
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Cancer genomics research	<p><b>Molecular profiling</b></p> <ul style="list-style-type: none"> <li>Ion AmpliSeq™ Comprehensive Cancer Panel - Cat. No. 4477685</li> <li>Ion AmpliSeq™ Made-to-Order Panels (Customize your own or browse predesigned community panels at <a href="http://ampliseq.com">ampliseq.com</a>)</li> <li>Ion AmpliSeq™ RNA Fusion Lung Cancer Research Panel</li> <li>Ion AmpliSeq™ RNA Pancreatic Adenocarcinoma Research Panel</li> <li>Ion AmpliSeq™ RNA Breast Cancer Research Panel</li> <li>Ion AmpliSeq™ RNA Cancer Panel (Visit <a href="http://ampliseq.com">ampliseq.com</a> for a complete list of panels)</li> <li>Ion AmpliSeq™ On-Demand Panels (Order at <a href="http://ampliseq.com">ampliseq.com</a> for germline analysis)</li> <li>Ion AmpliSeq™ HD Made-to-Order Panels (Order at <a href="http://ampliseq.com">ampliseq.com</a>)</li> </ul>	<p><b>Automated library preparation:</b></p> <p>Ion AmpliSeq™ Kit for Chef™ DL8 instrument - Cat. No. A29024 (32 rxns)</p> <p><b>Manual:</b></p> <p><b>For Ion AmpliSeq panels:</b></p> <p>Ion AmpliSeq™ Library Kit Plus (recommended for Ion AmpliSeq On-Demand Panels) - Cat. No. 4488990</p> <p>OR</p> <p>Ion AmpliSeq™ Library Kit 2.0 - Cat. No. 4480441 (96 rxns)</p> <p>AND</p> <p>Ion Xpress™ Barcode Adapters 1-96 Kit - Cat. No. 4474517</p> <p><b>For Ion AmpliSeq HD panels:</b></p> <p>Ion AmpliSeq™ HD Library Kit - Cat. No. A37694</p> <p>Ion AmpliSeq™ HD Dual Barcode Kit 1-24 - Cat. No. A37695</p> <p>OPTIONAL</p> <p>Ion Library Equalizer™ Kit - Cat. No. 4482298</p> <p>Ion AmpliSeq™ Sample ID Panel - Cat. No. 4479790</p>	<p>Ion Chef™ Instrument - Cat. No. 4484177</p> <p>AND</p> <p><b>Any of the following:</b></p> <p>Ion 510™ &amp; Ion 520™ &amp; Ion 530™ Kit-Chef - Cat. No. A34019 (1 run) or A34461 (2 runs)</p> <p>Ion 540™ Kit-Chef - Cat. No. A30011</p> <p>Ion 550™ Kit-Chef - Cat. No. A34541 (Includes template preparation and sequencing reagents)</p> <p>OPTIONAL</p> <p>Ion 550™ Single Chip Supplemental Kit - Cat. No. A36953</p> <p>OR</p> <p>Ion OneTouch™ 2 System - Cat. No. 4474779</p> <p>AND</p> <p><b>Any of the following:</b></p> <p>Ion 520™ &amp; Ion 530™ Kit-OT2 - Cat. No. A27751</p> <p>Ion 540™ Kit-OT2 - Cat. No. A27753 (Includes template preparation and sequencing reagents)</p>	<p>Ion GeneStudio™ S5 System - Cat. No. A38194</p> <p>OR</p> <p>Ion GeneStudio™ S5 Plus System - Cat. No. A38195</p> <p>OR</p> <p>Ion GeneStudio™ S5 Prime System - Cat. No. A38196</p> <p>Ion 510™ Chip Kit - Cat. No. A34292 (8 chips)</p> <p>Ion 520™ Chip Kit - Cat. No. A27762 (8 chips)</p> <p>Ion 530™ Chip Kit - Cat. No. A27764 (8 chips)</p> <p>Ion 540™ Chip Kit - Cat. No. A27765 (4 chips) or A27766 (8 chips)</p> <p>Ion 550™ Chip Kit** - Cat. No. A34537 (4 chips) or A34538 (8 chips)</p> <p>OPTIONAL</p> <p>Ion S5™ Controls Kit Plus - Cat. No. A30729</p> <p>Ion S5™ Calibration Standard - Cat. No. A27988</p>	<p><b>Torrent Suite™ Software</b></p> <p><b>Torrent Variant Caller Plugin</b></p> <p><b>Ion Reporter™ Software</b> (Server, Cat. No. 4487118 or cloud, <a href="http://ionreporter.thermofisher.com/ir/">ionreporter.thermofisher.com/ir/</a>)</p>
		<p>Ion AmpliSeq™ Cancer Hotspot Panel v2 - Cat. No. A32914 (Chef-Ready)</p> <p>Ion Torrent™ Oncomine™ Comprehensive Assay v3 - Cat. No. A35806 (Chef-Ready) and Cat. No. A35805 (Manual)</p> <p>Ion Torrent™ Oncomine™ Focus Assay* - Cat. No. A35957 and A29230</p> <p>Ion Torrent™ Oncomine™ BRCA Research Assay* - Cat. No. A32841 (Chef-Ready) and Cat. No. A32840 (Manual)</p> <p>Ion Torrent™ Oncomine™ Childhood Cancer Research Assay - Cat. No. A36485</p>			<p><b>Torrent Suite Software</b></p> <p><b>Torrent Variant Caller Plugin</b></p> <p><b>Ion Reporter Software</b> (Server, Cat. No. 4487118 or cloud, <a href="http://ionreporter.thermofisher.com/ir/">ionreporter.thermofisher.com/ir/</a>)</p> <p><b>Oncomine™ Knowledgebase Reporter</b></p>
	<p><b>Liquid biopsy</b></p> <ul style="list-style-type: none"> <li>Ion Torrent™ Oncomine™ Colon cfDNA Assay* - Cat. No. A31182</li> <li>Ion Torrent™ Oncomine™ Pan-Cancer Cell-Free Assay* - Cat. No. A37664</li> <li>Ion Torrent™ Oncomine™ Lung Cell-Free Total Nucleic Acid Research Assay* - Cat. No. A35864</li> <li>Ion Torrent™ Oncomine™ Breast cfDNA Research Assay v2* - Cat. No. A35865</li> </ul>	<p>Ion AmpliSeq HD Made-to-Order Panels <a href="http://ampliseq.com">ampliseq.com</a></p> <p>Ion AmpliSeq HD Library Kit - Cat. No. A37694</p> <p>Ion AmpliSeq HD Dual Barcode Kit 1-24 - Cat. No. A37695</p>			
	<p><b>Immuno-oncology</b></p> <ul style="list-style-type: none"> <li>Ion Torrent™ Oncomine™ Immune Response Research Assay - Cat. No. A32928 (Chef-Ready) and A32881 (Manual)</li> <li>Ion Torrent™ Oncomine™ TCR Beta-LR Assay - Cat. No. A35386</li> <li>Ion Torrent™ Oncomine™ Tumor Mutation Load Assay* - Cat. No. A37910 (Chef-Ready) and Cat. No. A37909 (Manual)</li> </ul>	<p>Ion Torrent™ Oncomine™ TCR Beta-SR Assay, DNA - Cat. No. A39072</p> <p>Ion Torrent™ Oncomine™ TCR Beta-SR Assay, RNA - Cat. No. A39359</p> <p>Ion Torrent™ Dual Barcode Kit 1-96 - Cat. No. A39360</p>			
<p><b>Hemato-oncology</b></p> <ul style="list-style-type: none"> <li>Ion Torrent™ Oncomine™ Myeloid Research Assay* - Cat. No. A36941 (Chef-Ready) and Cat. No. A36940 (Manual)</li> <li>Oncomine Childhood Cancer Research Assay - Cat. No. A36485</li> </ul>					

\* To learn more about Ion Torrent™ Oncomine™ solutions, go to [thermofisher.com/oncomine-assays](http://thermofisher.com/oncomine-assays). Oncomine solutions are performance-verified on specific Ion Torrent™ chip configurations and workflows; contact a member of the clinical research team to learn more. All Chef-ready library preparation configurations include the Ion AmpliSeq™ Kit for Chef DL8 containing barcodes and an equalizer. Manual library preparation assays include library prep reagents.

\*\* The Ion 550 Chip is only compatible with Ion GeneStudio Plus and Prime Systems.

# Product selection guide | Ion GeneStudio S5 Series



Select targets



Construct library



Prepare template



Run sequence



Analyze data

Application	Products*				
Gene expression analysis	<b>Targeted RNA sequencing</b> <ul style="list-style-type: none"> <li>● Ion AmpliSeq™ Made-to-Order RNA Panels* (Customize your own or browse pre-designed community panels at <a href="https://www.ampliseq.com">ampliseq.com</a>)</li> <li>Ion AmpliSeq™ Circular RNA Research Panel</li> <li>Ion AmpliSeq™ RNA MAPK Pathway Research Panel</li> <li>Ion AmpliSeq™ RNA Human Oncology Pathways Research Panel</li> <li>Ion AmpliSeq™ RNA Inflammation Response Research Panel</li> <li>Ion AmpliSeq™ RNA WNT Signaling Pathway Research Panel</li> <li>Ion AmpliSeq™ Long Non-coding RNA Research Panel</li> <li>Ion AmpliSeq™ RNA Stem Cell Research Panel</li> <li>Ion AmpliSeq™ RNA Apoptosis Panel</li> </ul> (Visit <a href="https://www.ampliseq.com">ampliseq.com</a> for a complete list of panels)	Ion AmpliSeq Library Kit 2.0 - Cat. No. 4480441 (96 rxns) OR Ion AmpliSeq Library Kit Plus - Cat. No. 4488990 OPTIONAL <b>Multiplexed sequencing:</b> Ion Xpress™ Barcode Adapters 1-16 Kit - Cat. No. 4471250 OR Ion Xpress Barcode Adapters 1-96 Kit - Cat. No. 4474517 OR Ion AmpliSeq Kit for Chef DL8 - Cat. No. A29024 (32 rxns)	Ion Chef Instrument - Cat. No. 4484177 AND <b>Any of the following:</b> Ion 510 & Ion 520 & Ion 530 Kit-Chef - Cat. No. A34019 (1 run) and A34461 (2 runs) Ion 540 Kit-Chef - Cat. No. A30011 Ion 550 Kit-Chef - Cat. No. A34541 (Includes template preparation and sequencing reagents) OR Ion OneTouch 2 System - Cat. No. 4474779 AND <b>Any of the following:</b> Ion 520 & Ion 530 Kit-OT2 - Cat. No. A27751 Ion 540 Kit-OT2 - Cat. No. A27753 (Includes template preparation and sequencing reagents)	Ion GeneStudio S5 System - Cat. No. A38194 OR Ion GeneStudio S5 Plus System - Cat. No. A38195 OR Ion GeneStudio S5 Prime System - Cat. No. A38196 Ion 510 Chip Kit - Cat. No. A34292 (8 chips) Ion 520 Chip Kit - Cat. No. A27762 (8 chips) Ion 530 Chip Kit - Cat. No. A27764 (8 chips) Ion 540 Chip Kit - Cat. No. A27766 (8 chips) Ion 550 Chip Kit - Cat. No. A34538 (8 chips) OPTIONAL Ion S5 Controls Kit Plus - Cat. No. A30729 Ion S5 Calibration Standard - Cat. No. A27988	Torrent Suite Software Coverage Analysis Plugin Ion AmpliSeq™ RNA Plugin AND Third-party software (e.g., Partek™ software)
		Ion AmpliSeq™ Transcriptome Human Gene Expression Kit - Cat. No. A26325 (24 rxns) or A26326 (96 rxns) or A26327 (384 rxns) Ion AmpliSeq™ Transcriptome Mouse Gene Expression Kit - Cat. No. A36553 (24 rxns) or A36554 (96 rxns) Ion AmpliSeq™ Transcriptome Human Gene Expression Panel, Chef-Ready Kit - Cat. No. A31446 (32 rxns) Ion AmpliSeq™ Transcriptome Mouse Gene Expression Panel, Chef-Ready Kit - Cat. No. A36412 (32 rxns) Ion AmpliSeq™ ERCC Companion Panel - Cat. No. A36552 (for optional control)			
	<b>Whole-transcriptome RNA sequencing</b> <ul style="list-style-type: none"> <li>● rRNA depletion: Invitrogen™ RiboMinus™ Eukaryote System v2 - Cat. No. A15026 OR Invitrogen™ Low Input RiboMinus™ Eukaryote System v2 - Cat. No. A15027 OPTIONAL <b>Sample controls:</b> Invitrogen™ ERCC RNA Spike-In Mix - Cat. No. 4456740</li> </ul>	<b>Automated library preparation:</b> Ion Total RNA-Seq Kit for AB Library Builder™ System - Cat. No. 4482416 AND Ion Total RNA Library Protocol Card for AB Library Builder™ System - Cat. No. 4482563 <b>Manual library preparation:</b> Ion Total RNA-Seq Kit v2 - Cat. No. 4475936 (12 rxns) and 4479789 (48 rxns) OPTIONAL <b>Multiplexed sequencing:</b> Ion Xpress™ RNA-Seq Barcode 1-16 Kit - Cat. No. 4475485			Torrent Suite Software Coverage Analysis Plugin Ion RNASeq Analysis Plugin AND Third-party software (e.g., Partek software)
	<b>mRNA sequencing</b> <ul style="list-style-type: none"> <li>● mRNA isolation: Invitrogen™ Dynabeads™ mRNA DIRECT™ Micro Purification Kit - Cat. No. 61021 OPTIONAL <b>Sample controls:</b> ERCC RNA Spike-In Mix - Cat. No. 4456740</li> </ul>				
<b>Small-RNA analysis</b> <ul style="list-style-type: none"> <li>● Invitrogen™ mirVana™ miRNA Isolation Kit - Cat. No. AM1560</li> </ul>				Torrent Suite Software Ion AmpliSeq™ Small RNA Analysis Plugin	

\* RNA quality control: Invitrogen™ Qubit™ 4 Fluorometer - Cat. No. Q33226 AND Invitrogen™ Qubit™ RNA HS Assay Kit - Cat. No. Q32852.

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	Select targets	Construct library	Prepare template	Run sequence	Analyze data	
	Application	Products				
Inherited disease research	Variant detection with targeted sequencing ●	Ion AmpliSeq On-Demand Panels (Order at <a href="https://www.ampliseq.com">ampliseq.com</a> ) Ion AmpliSeq Made-to-Order Panels (Customize your own or browse predesigned panels at <a href="https://www.ampliseq.com">ampliseq.com</a> ) Ion AmpliSeq HD Made-to-Order Panels	Automated library preparation: Ion AmpliSeq Kit for Chef DL8 instrument - Cat. No. A29024 (32 rxns) Manual: For Ion AmpliSeq panels: Ion AmpliSeq Library Kit Plus (recommended for Ion AmpliSeq On-Demand Panels) - Cat. No. 4488990 OR Ion AmpliSeq Library Kit 2.0 - Cat. No. 4480441 (96 rxns) AND Ion Xpress Barcode Adapters 1-96 Kit - Cat. No. 4474517 For Ion AmpliSeq HD panels: Ion AmpliSeq HD Library Kit - Cat. No. A37694 Ion AmpliSeq HD Dual Barcode Kit 1-24 - Cat. No. A37695 OPTIONAL Ion Library Equalizer Kit - Cat. No. 4482298 Ion AmpliSeq Sample ID Panel - Cat. No. 4479790	Ion Chef Instrument - Cat. No. 4484177 AND Any of the following: Ion 510 & Ion 520 & Ion 530 Kit-Chef - Cat. No. A34019 (1 run) or A34461 (2 runs) Ion 540 Kit-Chef - Cat. No. A30011 Ion 550 Kit-Chef - Cat. No. A34541 (Includes template preparation and sequencing reagents) OR Ion OneTouch 2 System - Cat. No. 4474779 AND Any of the following: Ion 520 & Ion 530 Kit-OT2 - Cat. No. A27751 Ion 540 Kit-OT2 - Cat. No. A27753 (Includes template preparation and sequencing reagents)	Ion GeneStudio S5 System - Cat. No. A38194 OR Ion GeneStudio S5 Plus System - Cat. No. A38195 OR Ion GeneStudio S5 Prime System - Cat. No. A38196 Ion 510 Chip Kit - Cat. No. A34292 (8 chips) Ion 520 Chip Kit - Cat. No. A27762 (8 chips) Ion 530 Chip Kit - Cat. No. A27764 (8 chips) Ion 540 Chip Kit - Cat. No. A27766 (8 chips) Ion 550 Chip Kit - Cat. No. A34538 (8 chips) OPTIONAL Ion S5 Controls Kit Plus - Cat. No. A30729 Ion S5 Calibration Standard - Cat. No. A27988	Torrent Suite Software Torrent Variant Caller Plugin Ion Reporter Software (server or cloud) for server, Cat. No. 4487118; for cloud, go to <a href="https://ionreporter.thermofisher.com/ir/">ionreporter.thermofisher.com/ir/</a>
	Variant detection with exome sequencing ●	Ion AmpliSeq™ Exome RDY Kit 1x8 - Cat. No. A38262 OR Ion AmpliSeq™ Exome RDY Kit 4x2 - Cat. No. A38264 Note: 2 exomes per Ion 540 Chip or 3–4 exomes per Ion 550 Chip.	Ion AmpliSeq™ library kits included in Ion AmpliSeq™ exome kits Multiplexed sequencing: Ion Xpress Barcode Adapters 1-16 Kit - Cat. No. 4471250 OPTIONAL DNA quality control Invitrogen™ Qubit™ 4 NGS Starter Kit - Cat. No. Q33228 (Includes Invitrogen™ Qubit™ 4 Fluorometer, Qubit™ dsDNA HS Assay Kit, and Qubit™ assay tubes)			Torrent Suite Software Ion Reporter Software (server or cloud) for server, Cat. No. 4487118; for cloud, go to <a href="https://ionreporter.thermofisher.com/ir/">ionreporter.thermofisher.com/ir/</a>
Reproductive health research	Preimplantation genetic screening (PGS) ●			Ion Chef Instrument - Cat. No. 4484177	Ion GeneStudio S5 System - Cat. No. A38194 OR Ion GeneStudio S5 Plus System - Cat. No. A38195 OR Ion GeneStudio S5 Prime System - Cat. No. A38196	Torrent Suite Software Ion Reporter Software (Aneuploidy workflow) for server, Cat. No. 4487118; for cloud, go to <a href="https://ionreporter.thermofisher.com/ir/">ionreporter.thermofisher.com/ir/</a>
		Ion ReproSeq™ PGS Kit with Ion 510 Chips - Cat. No. A34899 Ion ReproSeq™ PGS Kit with Ion 520 Chips - Cat. No. A34900 Ion ReproSeq™ PGS Kit with Ion 530 Chips - Cat. No. A34901				

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# Product selection guide | Ion GeneStudio S5 Series



Select targets

Construct library

Prepare template

Run sequence

Analyze data

Application	Products				
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Infectious disease research	<p>Discovery and characterization</p> <ul style="list-style-type: none"> <li>●</li> </ul>		<p><b>DNA</b>                      Ion Xpress™ Plus Fragment Library Kit - Cat. No. 4471269                      Ion Xpress Barcode Adapters 1-96 Kit - Cat. No. 4474517                      OR                      Thermo Scientific™ MuSeek™ Library Preparation Kit, Ion Torrent™ system-compatible - Cat. No. K1331                      Thermo Scientific™ MuSeek™ Barcode Set 1, Ion Torrent system-compatible - Cat. No. K1541  <b>RNA</b>                      Ion Total RNA-Seq Kit v2 - Cat. No. 4475936</p>	<p><b>Ion Chef Instrument</b> - Cat. No. 4484177                      AND                      Any of the following:  <b>Ion 510 &amp; Ion 520 &amp; Ion 530 Kit-Chef</b> - Cat. Nos. A34019 and A3446  <b>Ion 540 Kit-Chef</b> - Cat. No. A30011  <b>Ion 550 Kit-Chef</b> - Cat. No. A34541                      For 600 bp (longer-read) sequencing:  <b>Ion 520™ &amp; Ion 530™ ExT Kit-Chef</b> - Cat. No. A30670 (Template preparation and sequencing reagents for 400- to 600-base read libraries)                      OR  <b>Ion OneTouch 2 System</b> - Cat. No. 4474779                      AND                      Any of the following:  <b>Ion 520/530 Kit-OT2</b> - Cat. No. A27751  <b>Ion 540 Kit-OT2</b> - Cat. No. A27753 (Includes template preparation and sequencing reagents)</p>	<p><b>Ion GeneStudio S5 System</b> - Cat. No. A38194                      OR  <b>Ion GeneStudio S5 Plus System</b> - Cat. No. A38195                      OR  <b>Ion GeneStudio S5 Prime System</b> - Cat. No. A38196  <b>Ion 510 Chip Kit</b> - Cat. No. A34292 (8 rxns)  <b>Ion 520 Chip Kit</b> - Cat. No. A27762 (8 rxns)  <b>Ion 530 Chip Kit</b> - Cat. No. A27764 (8 rxns)  <b>Ion 540 Chip Kit</b> - Cat. No. A27766 (8 rxns)  <b>Ion 550 Chip Kit</b> - Cat. No. A34538 (8 rxns)                      OPTIONAL  <b>Ion S5 Controls Kit Plus</b> - Cat. No. A30729  <b>Ion S5 Calibration Standard</b> - Cat. No. A27988  <b>Ion S5™ ExT Calibration Standard</b> - Cat. No. A30738  <b>Ion Torrent™ E. coli Control 600 Library</b> - Cat. No. A32470</p>	<p><b>Torrent Suite Software Assembler SPAdes v3.1 Plugin</b></p>
	<p>Bacterial and viral analysis</p> <ul style="list-style-type: none"> <li>●</li> </ul>	<p><b>Ion AmpliSeq Made-to-Order Panels</b> (Customize your own panel for any genome, or select from the following pre-designed panels at <a href="http://ampliseq.com">ampliseq.com</a>)  <b>Ion AmpliSeq™ Pan-Bacterial Research Panel</b>  <b>Ion AmpliSeq™ Anti-Microbial Resistance Research Panel</b>  <b>Ion AmpliSeq™ TB Research Panel</b>  <b>Ion AmpliSeq™ Ebola Research Panel</b>  <b>Ion AmpliSeq HD Made-to-Order Panels</b></p>	<p><b>Automated library preparation:</b>  <b>Ion AmpliSeq Kit for Chef DL8</b> - Cat. No. A29024 (32 rxns)  <b>Manual:</b>                      For Ion AmpliSeq panels:  <b>Ion AmpliSeq Library Kit Plus</b> (recommended for Ion AmpliSeq On-Demand Panels) - Cat. No. 4488990                      OR  <b>Ion AmpliSeq Library Kit 2.0</b> - Cat. No. 4480441 (96 rxns)                      AND  <b>Ion Xpress Barcode Adapters 1-96 Kit</b> - Cat. No. 4474517                      For Ion AmpliSeq HD panels:  <b>Ion AmpliSeq HD Library Kit</b> - Cat. No. A37694  <b>Ion AmpliSeq HD Dual Barcode Kit 1-24</b> - Cat. No. A37695                      OPTIONAL  <b>Ion Library Equalizer Kit</b> - Cat. No. 4482298  <b>Ion AmpliSeq Sample ID Panel</b> - Cat. No. 4479790</p>	<p><b>Ion OneTouch 2 System</b> - Cat. No. 4474779                      AND                      Any of the following:  <b>Ion 520/530 Kit-OT2</b> - Cat. No. A27751  <b>Ion 540 Kit-OT2</b> - Cat. No. A27753 (Includes template preparation and sequencing reagents)</p>	<p><b>Ion S5 Controls Kit Plus</b> - Cat. No. A30729  <b>Ion S5 Calibration Standard</b> - Cat. No. A27988  <b>Ion S5™ ExT Calibration Standard</b> - Cat. No. A30738  <b>Ion Torrent™ E. coli Control 600 Library</b> - Cat. No. A32470</p>	<p><b>Torrent Suite Software Pathogen Detector Plugin</b>  <b>Applied Biosystems™ ABL ViroScore-HIV application subscription</b>  <b>Ion Reporter Software</b> (Cloud or server) for server, Cat. No. 4487118; for cloud, go to <a href="http://ionreporter.thermofisher.com/ir/">ionreporter.thermofisher.com/ir/</a></p>
	<p>Metagenomics</p> <ul style="list-style-type: none"> <li>●</li> </ul>	<p><b>Ion 16S™ Metagenomics Kit</b> - Cat. No. A26216</p>	<p><b>Ion Xpress Plus Fragment Library Kit</b> - Cat. No. 4471269 (For microbial community characterization by 16S rDNA sequencing)  <b>Ion Xpress Barcode Adapters 1-96 Kit</b> - Cat. No. 4474517 or other Ion Xpress Barcode Adapters Kits  <b>Ion Universal Library Quantitation Kit</b> - Cat. No. A26217</p>	<p><b>Ion S5 Controls Kit Plus</b> - Cat. No. A30729  <b>Ion S5 Calibration Standard</b> - Cat. No. A27988  <b>Ion S5™ ExT Calibration Standard</b> - Cat. No. A30738  <b>Ion Torrent™ E. coli Control 600 Library</b> - Cat. No. A32470</p>	<p><b>Torrent Suite Software Ion Reporter Software</b> (16S metagenomics workflow) for server, Cat. No. 4487118; for cloud, go to <a href="http://ionreporter.thermofisher.com/ir/">ionreporter.thermofisher.com/ir/</a></p>	

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# Product selection guide | Ion GeneStudio S5 Series



 **Select targets**     
  **Construct library**     
  **Prepare template**     
  **Run sequence**     
  **Analyze data**

Application	Products				
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Infectious disease research (continued)	<p><b>Metagenomics</b> (continued)</p> <ul style="list-style-type: none"> <li>●</li> </ul>		<p><b>Ion Xpress Plus Fragment Library Kit</b> - Cat. No. 4471269 (or other kits for library preparation from genomic DNA)  <b>MuSeek Library Preparation Kit, Ion Torrent system-compatible</b> - Cat. No. K1331  <b>Ion Universal Library Quantitation Kit</b> - Cat. No. A26217                      OR  <b>Ion Library TaqMan® Quantitation Kit</b> - Cat. No. 4468802                      OPTIONAL  <b>Ion Xpress Barcode Adapters 1-96 Kit</b> - Cat. No. 4474517                      OR                      other <b>Ion Xpress barcode adapter kits</b></p>	<p><b>Ion Chef Instrument</b> - Cat. No. 4484177                      AND  <b>Any of the following:</b>  <b>Ion 510 &amp; Ion 520 &amp; Ion 530 Kit-Chef</b> - Cat. Nos. A34019 and A3446  <b>Ion 540 Kit-Chef</b> - Cat. No. A30011  <b>Ion 550 Kit-Chef</b> - Cat. No. A34541  <b>For 600 bp (longer-read) sequencing:</b>  <b>Ion 520 &amp; Ion 530 ExT Kit-Chef</b> - Cat. No. A30670 (Template preparation and sequencing reagents for 400- to 600-base read libraries)                      OR  <b>Ion OneTouch 2 System</b> - Cat. No. 4474779                      AND  <b>Any of the following:</b>  <b>Ion 520/530 Kit-OT2</b> - Cat. No. A27751  <b>Ion 540 Kit-OT2</b> - Cat. No. A27753 (Includes template preparation and sequencing reagents)</p>	<p><b>Ion GeneStudio S5 System</b> - Cat. No. A38194                      OR  <b>Ion GeneStudio S5 Plus System</b> - Cat. No. A38195                      OR  <b>Ion GeneStudio S5 Prime System</b> - Cat. No. A38196  <b>Ion 510 Chip Kit</b> - Cat. No. A34292 (8 rxns)  <b>Ion 520 Chip Kit</b> - Cat. No. A27762 (8 rxns)  <b>Ion 530 Chip Kit</b> - Cat. No. A27764 (8 rxns)  <b>Ion S5 Calibration Standard</b> - Cat. No. A27988  <b>Ion S5 ExT Calibration Standard</b> - Cat. No. A30738  <b>E. coli Control 600 Library</b> - Cat. No. A32470  <b>Ion 540 Chip Kit</b> - Cat. No. A27766 (8 rxns)  <b>Ion 550 Chip Kit</b> - Cat. No. A34538 (8 rxns)                      OPTIONAL  <b>Ion S5 Controls Kit Plus</b> - Cat. No. A30729</p>	
Plant and animal genomics research	<p><b>Variant detection</b></p> <ul style="list-style-type: none"> <li>●</li> </ul>	<p>Design custom panels for any reference genome using the <b>Ion AmpliSeq™ Designer</b> at <a href="http://ampliseq.com">ampliseq.com</a>; upload a custom reference or use one of the preloaded reference genomes for mouse, chicken, cow, pig, sheep, Chinese hamster, canine, maize, rice, soybean, or tomato</p>	<p><b>Automated library preparation:</b>  <b>Ion AmpliSeq Kit for Chef DL8</b> - Cat. No. A29024 (32 rxns)  <b>Manual library preparation:</b>  <b>Ion AmpliSeq Library Kit 2.0 (96 LV format)</b> - Cat. No. 4480441  <b>Ion Xpress Barcode Adapters 1-96 Kit</b> - Cat. No. 4474517  <b>IonCode™ Barcode Adapters 1-384 Kit</b> - Cat. No. A29751                      OPTIONAL  <b>Ion Library Equalizer Kit</b> - Cat. No. 4482298</p>		<p><b>Torrent Suite Software</b>  <b>Torrent Variant Caller Plugin</b></p>	

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