Ion PGM™ System
Product selection guide

TARGETED SEQUENCING   GENOME SEQUENCING

		SELECT TARGETS	CONSTRUCT LIBRARY	PREPARE TEMPLATE	RUN SEQUENCE	ANALYZE DATA
	APPLICATION	PRODUCTS				
CANCER GENOMICS RESEARCH	Variant detection ●	**Ion panels** Ion AmpliSeq™ Cancer Hotspot Panel v2 Cat. No. 4475346 Ion AmpliSeq™ Comprehensive Cancer Panel Cat. No. 4477685 **Community panels** (order at ampliseq.com) Ion AmpliSeq™ *BRCA1* and *BRCA2* Research Panel* Ion AmpliSeq™ Colon and Lung Cancer Research Panel v2* Ion AmpliSeq™ *TP53* Research Panel* Ion AmpliSeq™ AML Research Panel* Ion AmpliSeq™ Custom DNA Panels (order at ampliseq.com)	**Ion AmpliSeq™ Library Kit 2.0 (96 LV format)** Cat. No. 4480441 **Ion Xpress™ Barcode Adapters 1–96 Kit** Cat. No. 4474517 OPTIONAL **Ion Library Equalizer™ Kit** Cat. No. 4482298 **Ion AmpliSeq™ Sample ID Panel** Cat. No. 4479790	**Ion Chef™ System** Cat. No. 4484177 AND **Ion PGM™ Hi-Q™ Chef Kit** Cat. No. A25948 (includes template preparation and sequencing reagents) **OR** **Ion OneTouch™ 2 System** Cat. No. 4474779 AND **Ion PGM™ Hi-Q™ OT2 Kit** Cat. No. A27739	**Ion PGM™ System** Cat. No. 4462921 AND For use with the Ion PGM™ Hi-Q™ OT2 Kit: **Ion PGM™ Hi-Q™ Sequencing Kit** Cat. No. A25592 AND Any of the following **Ion 314™ Chip Kit v2 BC** Cat. No. 4488144 **Ion 316™ Chip Kit v2 BC** Cat. No. 4488149 **Ion 318™ Chip Kit v2 BC** Cat. No. 4488150 **OR** For use with the Ion PGM™ Hi-Q™ Chef Kit: **Ion PGM™ Hi-Q™ Chef 400 Supplies Kit** Cat. No. A27293 (supplemental kit for 400-base read sequencing) AND Any of the following: **Ion 314™ Chip Kit v2 BC** Cat. No. 4488144 **Ion 316™ Chip Kit v2 BC** Cat. No. 4488149 **Ion 318™ Chip Kit v2 BC** Cat. No. 4488150	**Torrent Suite™ Software** • Torrent Variant-Caller Plugin AND **Ion Reporter™ Software**
	Quantitative gene expression ●	Ion AmpliSeq™ RNA Cancer Research Panel Cat. No. 4482572 Ion AmpliSeq™ RNA Apoptosis Panel Cat. No. 4482571 Ion AmpliSeq™ RNA Fusion Lung Cancer Research Panel (order at ampliseq.com) Ion AmpliSeq™ RNA Custom Panels (order at ampliseq.com)	**Ion AmpliSeq™ RNA Library Kit** Cat. No. 4482340 **Ion Xpress™ Barcode Adapters 1–96 Kit** Cat. No. 4474517			**Torrent Suite™ Software** • Coverage Analysis Plugin AND **Partek® Flow® Software**
GENETIC DISORDERS	Variant detection ●	**Ion panels** Ion AmpliSeq™ Inherited Disease Panel Cat. No. 4477686 **Community panels** (order at ampliseq.com) Ion AmpliSeq™ *CFTR* Research Panel* Ion AmpliSeq™ Hearing Loss Research Panel v1* Ion AmpliSeq™ Dementia Research Gene Panel* Ion AmpliSeq™ Custom DNA Panels (order at ampliseq.com)	**Ion AmpliSeq™ Library Kit 2.0 (96 LV format)** Cat. No. 4480441 **Ion Xpress™ Barcode Adapters 1–96 Kit** Cat. No. 4474517 OPTIONAL **Ion Library Equalizer™ Kit** Cat. No. 4482298 **Ion AmpliSeq™ Sample ID Panel** Cat. No. 4479790			**Torrent Suite™ Software** • Torrent Variant-Caller Plugin AND **Ion Reporter™ Software**
	Quantitative gene expression ●	Ion AmpliSeq™ Custom RNA Panels (order at ampliseq.com)	**Ion AmpliSeq™ RNA Library Kit** Cat. No. 4482340 **Ion Xpress™ Barcode Adapters 1–96 Kit** Cat. No. 4474517			**Torrent Suite™ Software** • Coverage Analysis Plugin AND **Partek® Flow® Software**
	Small RNA analysis ●	*mir*Vana™ miRNA Isolation Kit Cat. No. AM1560	**Ion Total RNA-Seq v2** Cat. No. 4475936 **Ion Xpress™ RNA-Seq Barcode 1–16 Kit** Cat. No. 4475485			
PREIMPLANTATION GENOMICS RESEARCH	Aneuploidy detection ●	Whole genome amplification	**Ion Xpress™ Plus Fragment Library Kit** Cat. No. 4471269 **Ion Xpress™ Barcode Adapters 1–96 Kit** Cat. No. 4474517			**Torrent Suite™ Software** AND **Ion Reporter™ Software** • Aneuploidy workflow

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APPLICATION	PRODUCTS				
PLANT AND ANIMAL GENOMICS — Variant detection ●	Design custom panels for any reference genome using the Ion AmpliSeq™ Designer at ampliseq.com. Upload a custom reference or use one of the preloaded reference genomes: Mouse, Chicken, Cow, Pig, Sheep, Chinese hamster, Dog, Maize, Rice, Soybean, Tomato	**Ion AmpliSeq™ Library Kit 2.0 (96 LV format)** Cat. No. 4480441 **Ion Xpress™ Barcode Adapters 1–96 Kit** Cat. No. 4474517 OPTIONAL **Ion Library Equalizer™ Kit** Cat. No. 4482298	**Ion Chef™ System** Cat. No. 4484177 AND **Ion PGM™ Hi-Q™ Chef Kit** Cat. No. A25948 (includes template preparation and sequencing reagents) **OR** **Ion OneTouch™ 2 System** Cat. No. 4474779 AND **Ion PGM™ Hi-Q™ OT2 Kit** Cat. No. A27739	**Ion PGM™ System** Cat. No. 4462921 AND **For use with the Ion PGM™ Hi-Q™ OT2 Kit:** **Ion PGM™ Hi-Q™ Sequencing Kit** Cat. No. A25592 AND Any of the following **Ion 314™ Chip Kit v2 BC** Cat. No. 4488144 **Ion 316™ Chip Kit v2 BC** Cat. No. 4488149 **Ion 318™ Chip Kit v2 BC** Cat. No. 4488150 **OR** **For use with the Ion PGM™ Hi-Q™ Chef Kit:** **Ion PGM™ Hi-Q™ Chef 400 Supplies Kit** Cat. No. A27293 (supplemental kit for 400-base read sequencing) AND Any of the following: **Ion 314™ Chip Kit v2 BC** Cat. No. 4488144 **Ion 316™ Chip Kit v2 BC** Cat. No. 4488149 **Ion 318™ Chip Kit v2 BC** Cat. No. 4488150	**Torrent Suite™ Software** • Torrent Variant-Caller Plugin
MICROBIAL GENOMICS — Discovery and characterization ●		For mate-pair sequencing: **Ion TrueMate™ Plus Library Kit** Cat. No. A25656 For whole genome sequencing: **Ion Xpress™ Plus Fragment Library Kit** Cat. No. 4471269 **OR** **Thermo Scientific® MuSeek™ Library Preparation Kit** Cat. No. 4480829 OPTIONAL **Ion Xpress™ Barcode Adapters 1–96 Kit** Cat. No. 4474517			**Torrent Suite™ Software** • Assembler Plugin • Assembler SPAdes v3.1 Plugin **DNASTAR® Lasergene® Genomics Suite**
Metagenomics ●	**Ion 16S™ Metagenomics Kit** Cat. No. A26216	**Ion Xpress™ Plus Fragment Library Kit** Cat. No. 4471269 OR **Thermo Scientific® MuSeek™ Library Preparation Kit** Cat. No. 4480829 OPTIONAL **Ion Xpress™ Barcode Adapters 1–96 Kit** Cat. No. 4474517			**Torrent Suite™ Software** AND **Ion Reporter™ Software** • 16S™ Metagenomics workflow
Bacterial typing research ●		For use with Ion 16S™ Metagenomics Kit **Ion Universal Library Quantitation Kit** Cat. No. A26217			**Torrent Suite™ Software** • Pathogen Analyzer Plugin **Ridom™ SeqSphere+™ Software**
Viral typing research ●	**PathAmp™ FluA Reagents** Cat. No. 4485019				**Torrent Suite™ Software** • Pathogen Analyzer Plugin

*Designed and verified with leading researchers.

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