

Ion AmpliSeq Exome RDY Kit



Scalable exome sequencing with simplified workflows

The Ion AmpliSeq™ Exome RDY Kit enables the fastest and simplest exome enrichment, with oligo pools for ultrahigh-multiplex PCR exome enrichment dried down in a 96-well plate. Exome libraries are typically produced under 6 hours with less than 50 minutes of hands-on time. The Ion AmpliSeq Exome RDY Kit enables high-efficiency enrichment with more than 90% target bases covered at 20x and more than 90% uniformity (Figure 1). Leveraging the ultrahigh-multiplex PCR approach of Ion AmpliSeq™ technology along with the scalability of the Ion GeneStudio S5™ Prime System, the Ion AmpliSeq Exome RDY Kit allows rapid sequencing of key exonic regions of the genome, enabling you to go from DNA to variants in just 2 days (Figure 2).

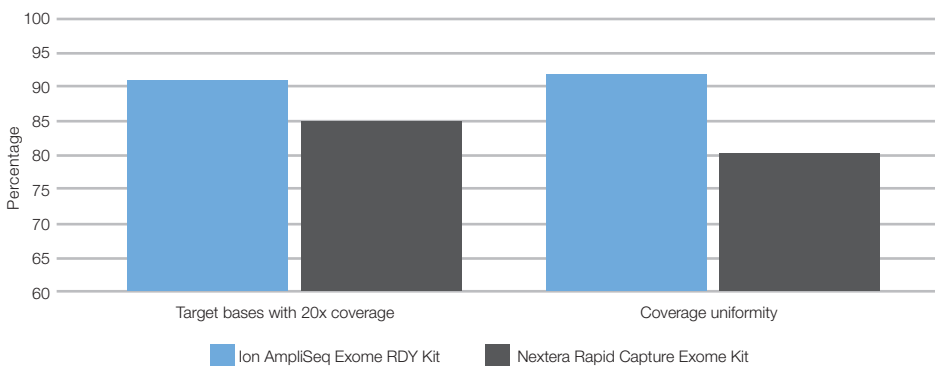


Figure 1. Ion AmpliSeq Exome RDY Kit results, based on an average of 22 exomes across 11 sequencing runs. The coverage data for the Illumina™ Nextera™ Rapid Capture Exome Kit were obtained from the BaseSpace Blog by Illumina. The uniformity value was obtained from the Nextera Rapid Capture Exome Kit data sheet.

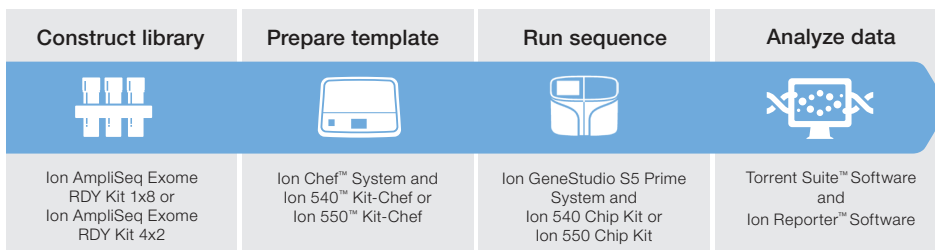


Figure 2. Two-day targeted exome sequencing workflow using Ion AmpliSeq Exome RDY Kit.

- Easy exome enrichment**
 Simplicity, specificity, and the speed of PCR, with less than 50 minutes of hands-on time with dried-down primers
- On-demand exome sequencing**
 Scalable throughput of 1–12 exomes per day, or up to 48 exomes per week*
- Integrated bioinformatics**
 Easy, integrated software workflow delivers a focused list of annotated variants

“[The] Ion AmpliSeq Exome RDY [Kit] provides the simplest exome enrichment. The dried-down primers reduce the number of pipetting steps and allow preparation of reproducible libraries that sequence with high uniformity. The straightforward workflow—similar to PCR—allows for someone with little-to-no next-generation sequencing experience to successfully perform the protocol.”

Richard Allcock
 Director, Lotterywest State Biomedical Facility Genomics School of Pathology and Laboratory Medicine
 The University of Western Australia

Flexible, on-demand exome sequencing

With the scalable chip format of the Ion GeneStudio S5 Prime System, you can sequence 1–4 exomes per run, economically and without the need to batch samples. Simply select the Ion™ chip type that best fits your project size. For higher-throughput laboratories, sequence up to 48 exomes per week* using the Ion Chef System, Ion GeneStudio S5 Prime System, and Ion 550 Chip (Figure 3).

Ion AmpliSeq Exome RDY Panel	
Targets	>97% of CCDSs with 5 bp padding around exons
Primer pool size	~294,000 primer pairs across 12 primer pools
Input DNA required per sample	50–100 ng
Exome enrichment and library construction time	<6 hours total turnaround time, with <50 minutes of hands-on time
Time-to-results	2 days from DNA to variants
Sample multiplexing	Ion 540 Chip accommodates 1–3 exomes per run; Ion 550 Chip accommodates 1–4 exomes per run
Target bases covered at 20x	>90%
Uniformity	>90%

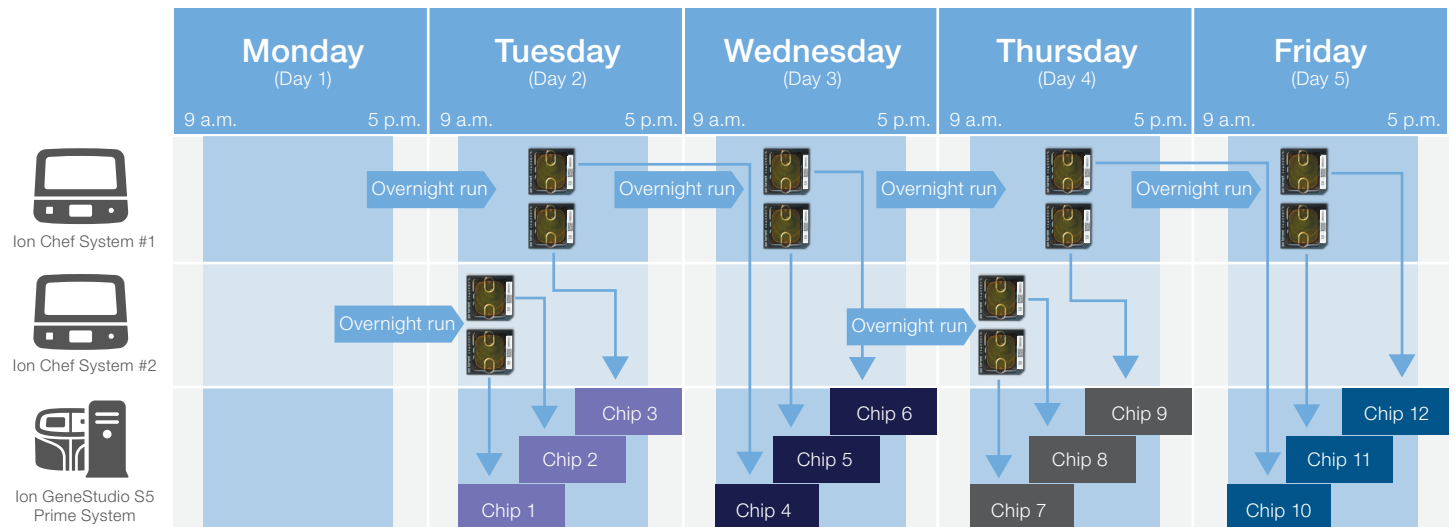


Figure 3. Ion GeneStudio S5 Prime System and Ion 550 Chip enable up to 12 exomes per day, 48 per week; each Ion 550 Chip fits up to 4 exomes at 85x coverage.

Ordering information

Product	Cat. No.
Ion AmpliSeq Exome RDY Kit 1x8	A38262
Ion AmpliSeq Exome RDY Kit 4x2	A38264

* Assuming a 8-hour work day and 5-day work week. Requires two Ion Chef instruments.

Find out more at thermofisher.com/ionexome

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