

# Ion Proton™ Hi-Q™ Sequencing Solution

Improved accuracy. Easier workflow.



## Improved variant calling accuracy

The Ion Proton™ Hi-Q™ Sequencing Solution delivers our most accurate variant calling performance yet. The comprehensive solution includes powerful enhancements to the template kit, sequencing chemistry, as well as the variant calling modules within Torrent Suite™ Software v4.4. These updates have reduced false positive rates by up to 71% for exome sequencing (Figure 1) while also delivering improvements in coverage across GC-rich amplicons (Figure 2).

Feedback from multiple customer sites have shown that this new kit delivered improved variant calling performance, enabling greater insights into the discovery of causal variants for research.

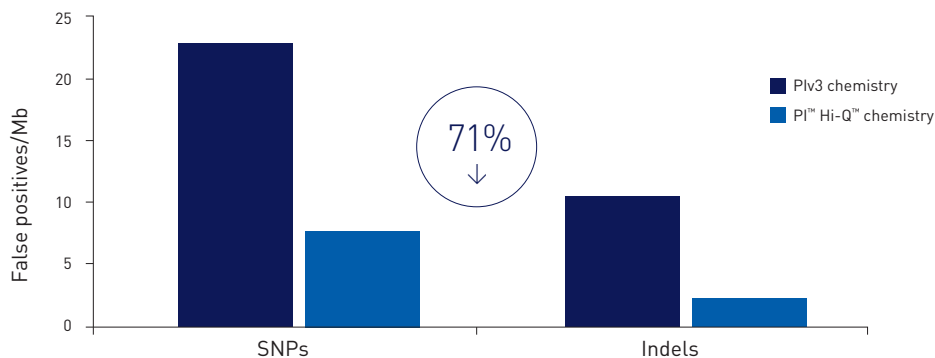


Figure 1. The new Ion PI™ Hi-Q™ sequencing chemistry combined with the Ion PI™ Hi-Q™ template kit and advancements in Torrent Suite™ Software 4.4 decrease the false positive rates for Ion AmpliSeq™ exome sequencing by up to 71%, compared to the old Plv3 chemistry.

“This new [Ion PI™ Hi-Q™] chemistry has greatly reduced the amount of orthogonal confirmation of variants we need to perform in our lab.”

John Thompson, Claritas Genomics

“We’ve always been happy with the [Ion] AmpliSeq™ Exome data but with the new [Ion PI™] Hi-Q™ chemistry we get even better data. We’ve noticed a 50% reduction in indel false positives which will give us a shorter candidate list, making it ideal for *de novo* or trio experiments.”

Adam Ameur, Bioinformatician,  
Genome Center, Uppsala University

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## Reduce your orthogonal confirmation workload

Sanger sequencing is most often employed as the orthogonal technology for germline nuclear DNA testing. While it is still highly recommended to use orthogonal confirmation tools such as Sanger sequencing to confirm variants discovered with next-generation sequencing, our customers have noted that the improved variant calling accuracy of the new Ion Proton™ Hi-Q™ Sequencing Solution helps reduce the volume of confirmatory testing, alleviating a substantial amount of the labor and cost burden on their lab.

## Simplified workflow—zero chip pre-treatment

The Ion Proton™ Hi-Q™ Sequencing Solution also features the new Ion PI™ Chip v3, which removes the need for the 45-minute chip pre-treatment step, resulting in a 60% reduction in the hands-on time for using the Ion Proton™ System (Figure 3).

“The new [Ion] P1v3 chips are great, the time savings is a major improvement.”

Inger Jonasson, Laboratory Manager,  
Genome Center, Uppsala University

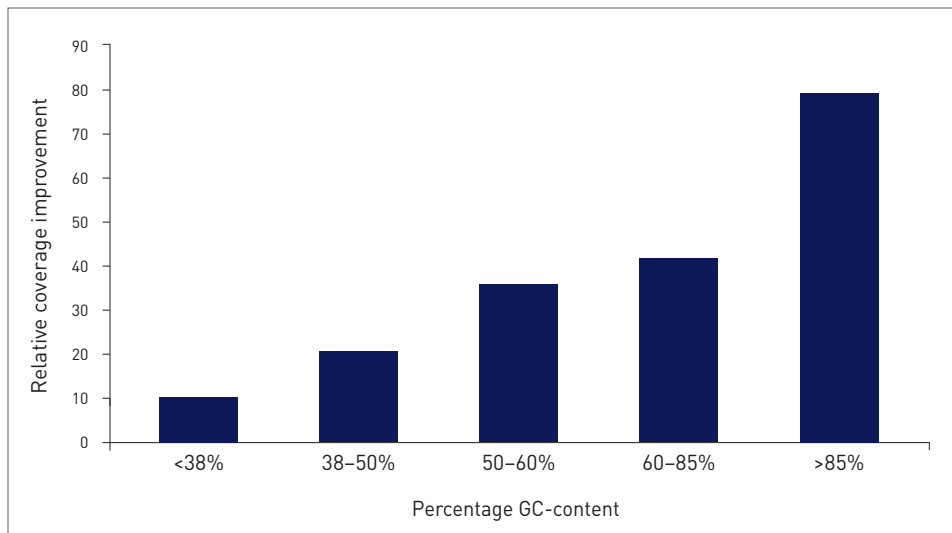


Figure 2. Ion PI™ Hi-Q™ chemistry enables improved coverage across GC-rich regions for Ion AmpliSeq™ Exome sequencing, relative to previous P1v3 sequencing chemistry.

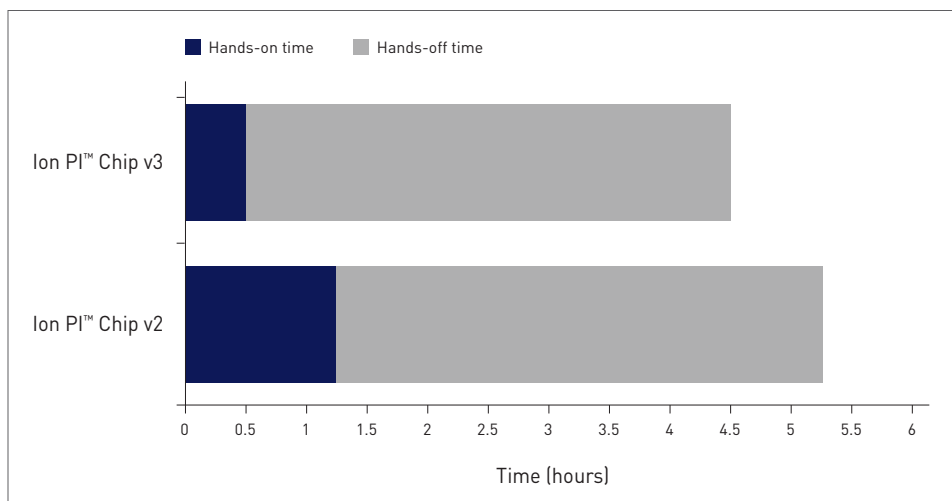


Figure 3. Ion Proton™ System hands-on time.

## Ordering information

Product	Cat. No.
Ion PI™ Hi-Q™ OT2 200 Kit	A26434
Ion PI™ Hi-Q™ Sequencing 200 Kit	A26433
Ion PI™ Hi-Q™ Chef Kit	A27198
Ion PI™ Chip Kit v3 (BC), 8 pack	A26771
Torrent Suite™ Software v4.4	

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