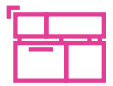


GERMLINE VARIANT DETECTION WITH THE ONSO SYSTEM



Bringing short-read sequencing accuracy to the next level

Powered by sequencing by binding (SBB™) chemistry, the PacBio® short-read Onso™ platform delivers extraordinary base-calling accuracy (90% of bases at $\geq Q40$), setting a new standard in genetic research. This remarkable accuracy instills a new level of confidence in sequencing data and improves the ability to characterize challenging genetic variations through genome-wide and targeted approaches.

Where conventional short-read methods fall short, the Onso system resolves low-complexity, highly repetitive regions. This precision generates fewer false positive calls, resulting in more error-free exomes and genomes as well as increased biological insights.



Your advantages with the Onso system

- Run short-read applications with Q40+ base-calling accuracy
- Higher resolution of homopolymer regions
- A benchtop solution for mid-throughput applications (e.g., panels and exomes)
- Seamless integration with existing short-read sequencing ecosystems

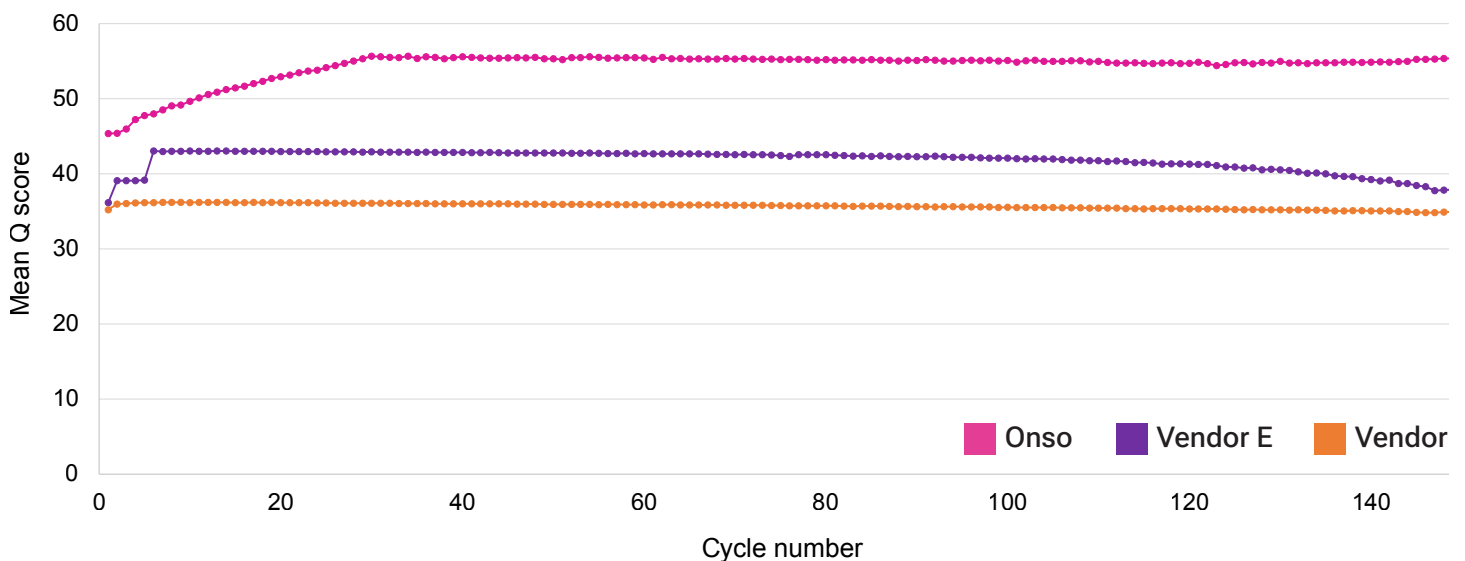


Figure 1. Mean Q score per cycle for a 2x150 whole genome sequencing run on HG002 demonstrates the superior read accuracy of the Onso system vs two on-market short-read platforms.

A closer look at extraordinary accuracy

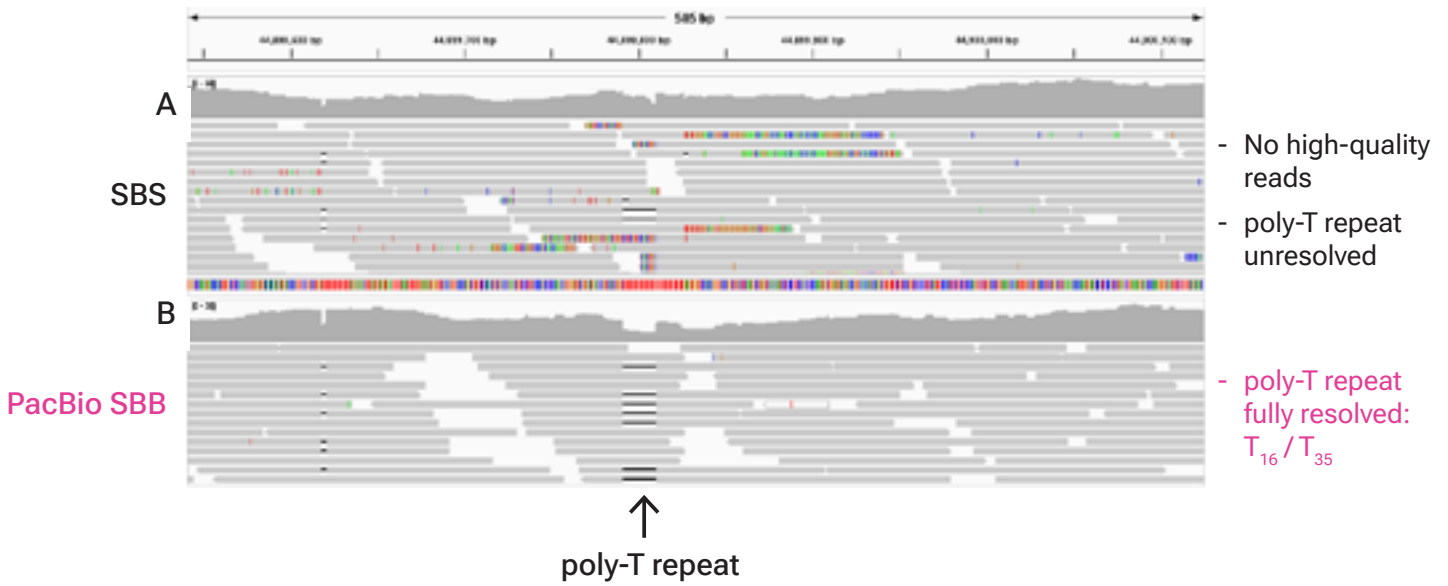


Figure 2. The Onso sequencing system produces near-perfect reads through the variable poly-T region within the *TOMM40* gene. A) Sequencing-by-synthesis (SBS) was unable to fully resolve the low-complexity region, with many false-positive calls. B) SBB sequencing on the Onso platform more comprehensively sequenced and confidently resolved this region, resulting in a call of T16 vs the original estimate of T35.

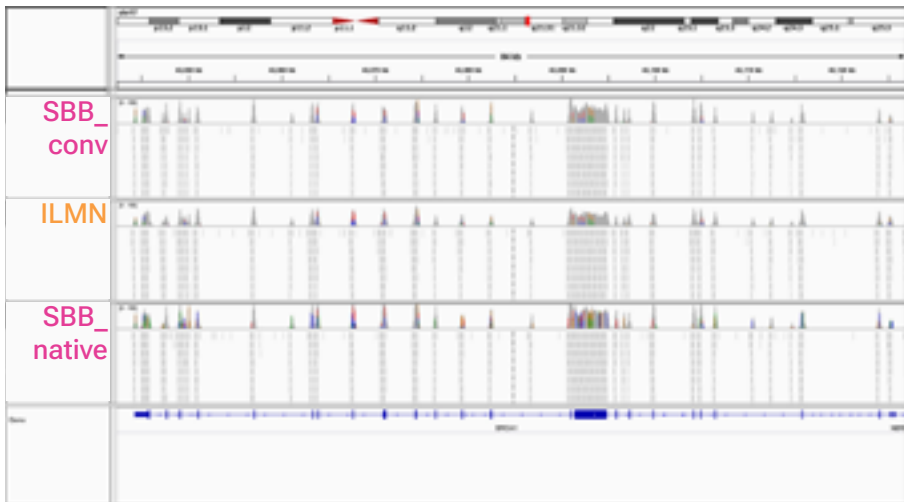


Figure 3. Twist Exome 2.0 sequencing data of the *BRCA1* gene with three different short-read methods: a converted library (Onso S1), a standard SBS library, and native Onso library prep library (Onso S2). Both S1 and S2 samples were sequenced on Onso at 2x100 bp at 60x mean depth.



Learn more about the Onso demo data: pacb.com/datasets

