



# Next-level discovery

Setting a new standard for short reads with the Onso™ system



15× higher accuracy  
than other benchtop  
sequencers



Unprecedented  
sensitivity



Less sequencing  
reduces cost  
+ allows higher  
throughput



Seamless workflow  
integration

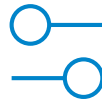
# Platform features

Powered by the innovative **sequencing by binding (SBB®) technology**, the Onso system delivers unprecedented accuracy and sensitivity to advance your critical and groundbreaking research.



## Higher accuracy

Unique SBB technology delivers 15× higher accuracy for sensitive and specific characterization of low complexity regions with 90% Q40+. Fewer errors mean less false positives and more biological insight.



## Improved sensitivity

Using fewer reads, the Onso system lowers the limit of detection, which drives the sensitivity of applications like liquid biopsy. This enables the identification of variants missed by other short-read sequencing platforms.



## Streamlined workflow

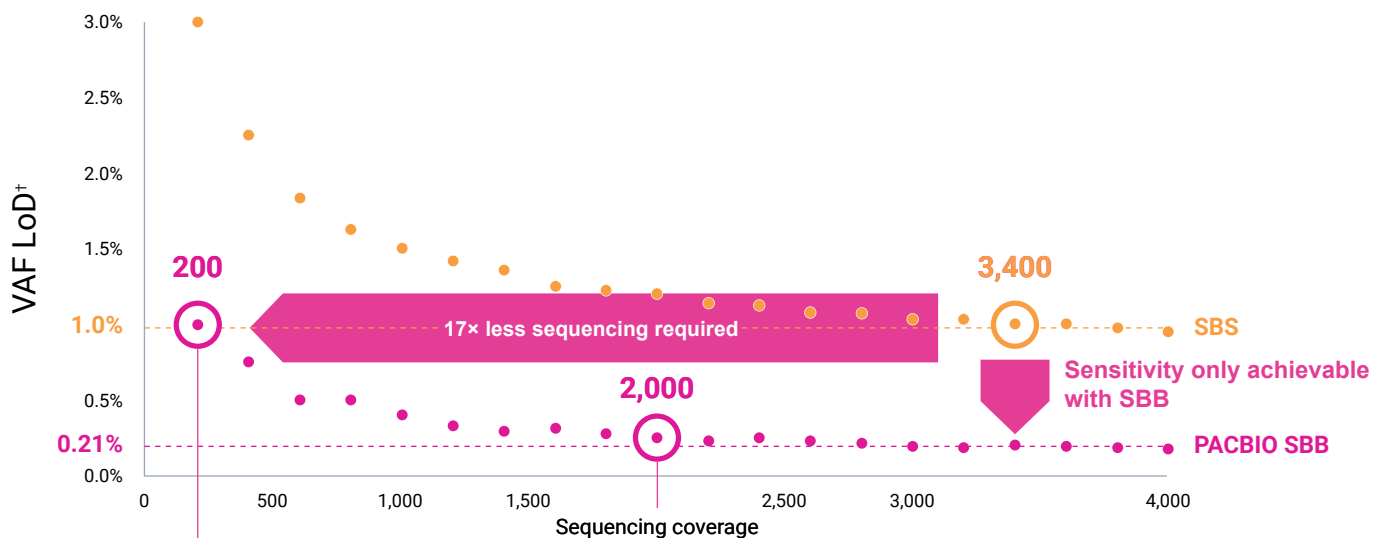
Simple workflows easily integrate into existing laboratory processes, reducing time and labor.



## Efficiency

Q40+ delivers high quality results at lower read depths, enabling scalable sequencing while reducing time and cost. Reduced need for unique molecular identifiers (UMIs) lowers workflow complexity and cost.

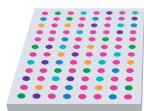
## Industry-leading sensitivity for low-frequency allele detection in liquid biopsy\*



Q40+ enables you to find variants with less coverage, allowing more samples per run

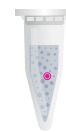
Ability to drive down your limits of detection to identify extremely rare variants not seen with SBS

### INCREASED THROUGHPUT AT LOWER COST PER SAMPLE



Many samples

### IMPROVED SENSITIVITY



Rare variant

Single sample

\* Analytical validation (TP53 plasmid spike-in) of hybrid capture-based NGS genomic profiling of cell-free circulating tumor DNA

† Variant allele frequency (VAF) limit of detection (LoD) at 99.99% specificity for >90% of the sites

# The Onso system

The Onso system is a scalable and flexible benchtop platform that gives you the flexibility to integrate existing short-read tools.



## Onso system key accessories:

- Library conversion kit
- PacBio® native library prep kits (HMW and fragmented DNA preparation)
- Blocking oligos for hybridization capture methods
- Library amplification kit
- Library quantification kit
- Lambda sequencing control library (spike-in library)

Onso reagents	Read length	Reads	Output (Gb)	Run time	Quality score
200 cycle sequencing kit	2 × 100 bp 1 × 200 bp	400–500 M	100	32 hours	≥90% Q40
300 cycle sequencing kit	2 × 150 bp	400–500 M	150	48 hours	

## What can you do with the Onso system?



### Cancer research

Enable development of screening, monitoring, and therapy selection



### Gene editing

Confirmation of editing outcomes and biomarker discovery



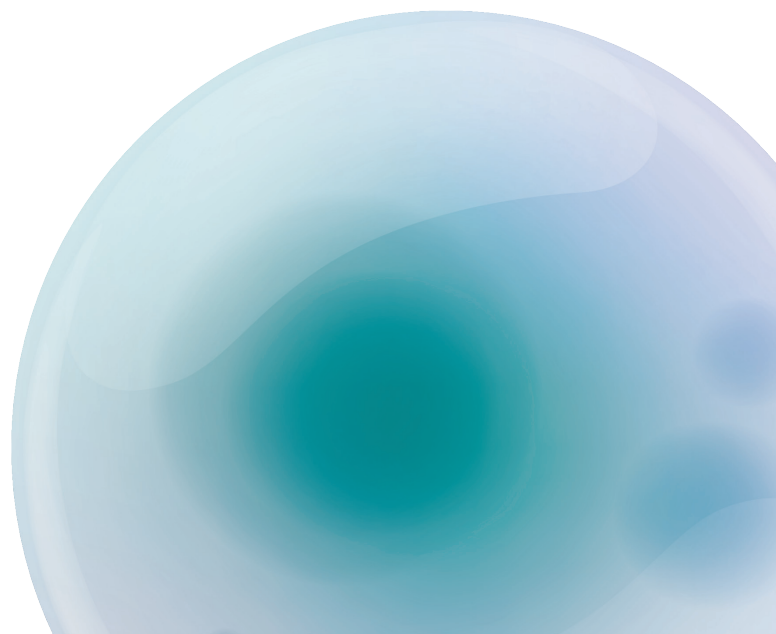
### Exome/panels

Validated WES using Twist Bioscience hybrid capture protocol



### Single cell

10x Genomics *Chromium*  
Next GEM *Single Cell 3'*  
libraries supported





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## READY TO GET STARTED WITH THE ONSO SYSTEM?



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**pacb.com/documentation**

Application-specific workflows

**pacb.com/applications**

Publications using SMRT® sequencing

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