

HiFi sequencing on the Sequel IIe system

HiFi sequencing advantages



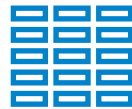
Long reads

Reads tens of kilobases in length



High accuracy

Sequencing free of systematic errors



Uniform coverage

No bias from GC content



Single-molecule resolution

Reads from individual native DNA molecules



Epigenetics

DNA methylation without special library preparation

Our solution

Sequel[®] IIe system

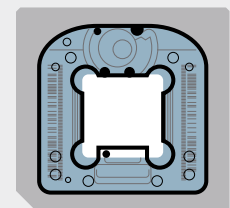
- Supports automated run processing for extended walk-away time
- Provides direct access to HiFi reads
- Delivers 5-base sequencing with methylation status for CpG sites
- Supports the range of HiFi sequencing applications



HiFi consumables

Our consumables support simple, automation-friendly workflows from sample through sequencing:

- Nanobind[®] kits for DNA extraction
- SMRTbell[®] prep kit 3.0 for library preparation
- Sequel II binding kit 3.2 for sequencing preparation
- Sequel II sequencing kit 2.0 and SMRT[®] Cell 8M for sequencing



SMRT[®] Link software

Our analytical software tools support you at every step, from run design through analysis



HiFi sequencing applications

Gain comprehensive views of genomes, transcriptomes, and epigenomes.



Whole genome sequencing

Sequence and assemble complete, reference-quality genomes and phase haplotypes



Variant detection

Call all variants — single nucleotide, indel, and structural variants — with high precision and recall



RNA sequencing

Characterize isoforms with direct sequencing of full-length transcripts — no assembly required



Targeted sequencing

Focus on variation in even the most difficult regions of the genome



Metagenomics

Resolve closely related sequences within a heterogeneous mixture



Epigenetics

Directly detect DNA modifications during sequencing

READY TO GET STARTED WITH HIFI SEQUENCING?



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North America: nasales@pacb.com
South America: sasales@pacb.com
EMEA: emea@pacb.com
Asia Pacific: apsales@pacb.com



Parts
Sequel IIe system (101-986-400)
Nanobind CBB big DNA kit (NB-900-001-01)
SMRTbell prep kit 3.0 (102-182-700)
Binding kit 3.2 and cleanup beads (102-333-300)
Sequel II sequencing kit 2.0 (101-820-200)
SMRT cell 8M tray (101-389-001)



Instrument operating environment

Power requirements	208–240 VAC, 30A. UPS recommended
Operating temperature	19–25°C (66.2–77°F) ±2°C per hour
Humidity	20–80%, noncondensing
Ventilation	HVAC capacity of up to 13,956 BTU (4090 watts)
Nitrogen	50 psi (2,585 torr)
W×D×H	36.5 × 34 × 66 in (92.7 × 86.4 × 167.6 cm)
Weight	798 lb (362 kg)

Headquarters
1305 O'Brien Drive
Menlo Park, CA 94025
United States
1.650.521.8000

Customer service
1.877.920.PACB (7222);
option 1
Fax: 1.650.618.2699
orders@pacb.com

Technical support
1.877.920.PACB (7222);
option 2
support@pacb.com

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