

### Redefining Comprehensive Genomic Analysis

Genomic sequencing has long been characterized by a trade-off between read length and accuracy. Traditional next-generation sequencing (NGS) provides high-accuracy short reads but may struggle to resolve long repeats and complex structural variants (SVs), while older long-read methods offered length but suffered from high error rates.



| Feature             | HiFi Sequencing Technology                                                                                    | Primary Advantage                                                                                                                                                           |
|---------------------|---------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Accuracy</b>     | ≥99.95% (Q33) accuracy in a single read, achieved via Circular Consensus Sequencing (CCS).                    | Highest-quality data for all variant types (SNVs, indels, SVs), eliminating the need to "polish" long reads with short-read data.                                           |
| <b>Completeness</b> | Long reads resolve structural variants (SVs) and tandem repeats in a single read; sequencing uses native DNA. | Enables the generation of gapless, Telomere-to-Telomere (T2T) genome assemblies, providing the most complete view of all genetic variation.                                 |
| <b>Mappability</b>  | Ultra-long reads (typically 10–25 kb) are generated with uniform coverage (low GC bias).                      | High confidence mapping into complex, repetitive, and GC-rich "dark regions" of the genome, which are often inaccessible to short reads.                                    |
| <b>Phasing</b>      | Long, accurate reads span multiple heterozygous variants on a single DNA molecule.                            | Streamlined, accurate haplotype phasing (determining which variants are on the maternal vs. paternal chromosome) over long distances, often without parent-child trio data. |



#### Contact Us

[www.admerahealth.com](http://www.admerahealth.com) | [custom-services@admerahealth.com](mailto:custom-services@admerahealth.com) | 908-222-0533

126 Corporate Boulevard, South Plainfield, New Jersey 07080

© 2025 Admera Health. All rights reserved.



# Long-Read Sequencing

## With PacBio Revio

### Technology Advantages

PacBio High Fidelity (HiFi) Sequencing resolves this fundamental challenge. Utilizing Single Molecule, Real-Time (SMRT®) technology, HiFi reads deliver an optimal combination: long reads (~10–25 kb) with unparalleled accuracy (≥99.9%, or Q30).

HiFi sequencing, therefore, provides the most complete and accurate view of the genome, transcriptome, and epigenome, driving research to the different level.

### Superior Support for Your Research

- Best Pricing
- 3-4 Week Turnaround
- US Operations

| PacBio HiFi Advantages               |                                                                                                                                                                              |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Sequencing Only</b>               | Highly accurate long HiFi reads, perfectly suited for bioinformatics pipelines.                                                                                              |
| <b>Full-Length RNA-seq</b>           | Full-length reads span transcripts, eliminating assembly and accurately identifying alternative splicing, novel isoforms, and gene fusions.                                  |
| <b>Whole Genome Sequencing (WGS)</b> | Accurately resolves structural variants (SVs) and repetitive elements for the most contiguous and correctly phased (de novo) assemblies.                                     |
| <b>Metagenomics</b>                  | Long, accurate reads assemble closed, high-quality MAGs and provide full-length marker genes (e.g., 16S) for deep, strain-level classification.                              |
| <b>Amplicon Sequencing</b>           | Single reads span the full amplicon (up to 20 kb), enabling direct phasing of multiple variants and resolving complex gene families (like HLA) and tandem repeat expansions. |
| <b>Epigenetics</b>                   | Simultaneous detection of 5mC (and microbial m6A, m4C) alongside sequence data, with no bisulfite conversion required.                                                       |



#### Contact Us

[www.admerahealth.com](http://www.admerahealth.com) | [custom-services@admerahealth.com](mailto:custom-services@admerahealth.com) | 908-222-0533

126 Corporate Boulevard, South Plainfield, New Jersey 07080

© 2025 Admera Health. All rights reserved.