LoopSeq™ Sequencing

The advantages of long-read sequencing. the convenience of your existing sequencing infrastructure

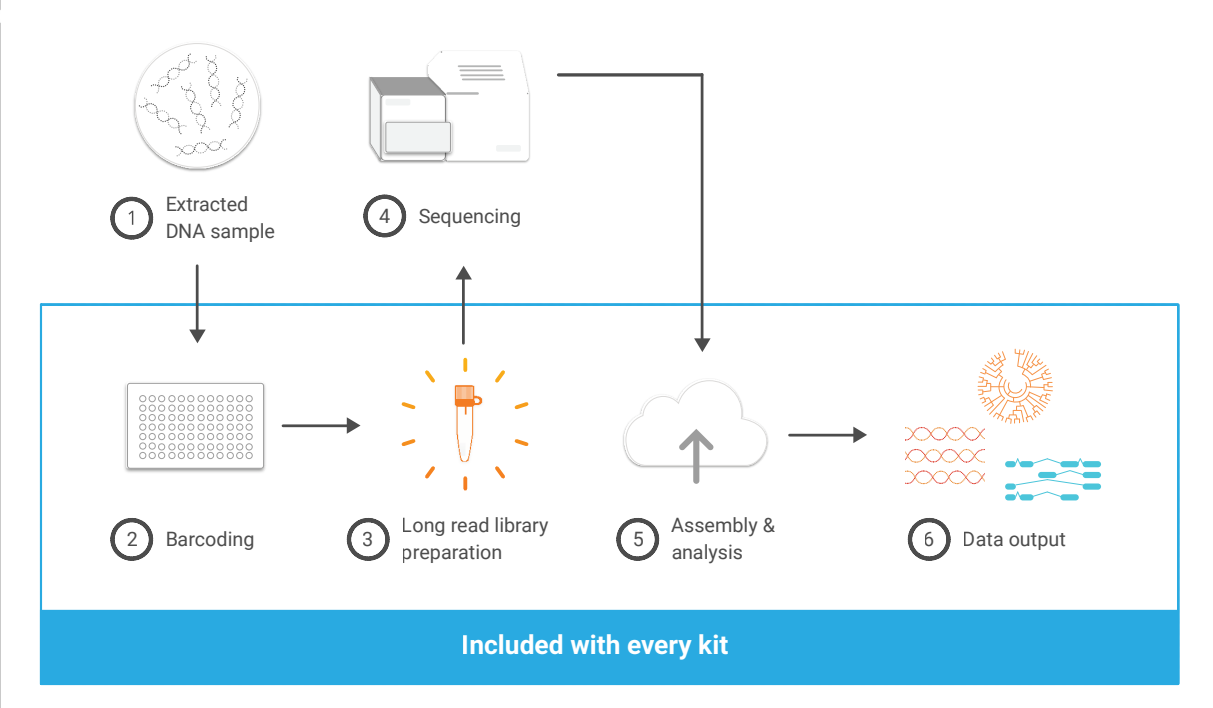
Next generation sequencing (NGS) has been an incredibly powerful technique, but there are many applications where short-read sequencing comes up, well, short.

Fortunately, **Loop Genomics** has developed an affordable, easy-to-implement solution that uses existing Illumina NGS sequencers to produce full-length, long-read sequences. Simple, efficient, and powerfully accurate, **LoopSeq™ Sequencing Kits** and **Sequencing Services** expand what you can accomplish using NGS.

- Highly accurate long-read sequencing
- Leverages your existing short-read sequencing infrastructure
- Delivers lower error rates than other approaches
- Uses a simple, one-tube (yes, one tube!) workflow
- **APPLICATIONS**: MICROBIOME • TRANSCRIPTOME • GENOME • AMPLICON

How does LoopSeq work? It's all in the kit!

The **LoopSeq** workflow is simple, streamlined, and leverages your existing sequencing instrument.



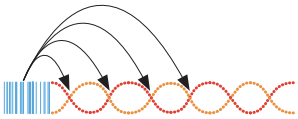
LOOP GENOMICS

The power of the **LoopSeq** approach stems from our unique, proprietary barcoding technology and implementation. The key steps of the workflow are described below.

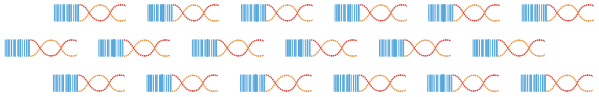
Barcoding.
Every sample is exposed to millions of unique barcodes, but only one barcode attaches per strand of DNA.

Amplification.
Every molecule, along with its unique barcode, is amplified using PCR.

Distribution.
Each copy of the amplified DNA has the barcode randomly distributed to a different location.



Sequencing.
Sequence the segment next to each barcode.



Assembly.
Short reads that share the same barcode are combined algorithmically into a full-length molecule using linked-read *de novo* assembly.

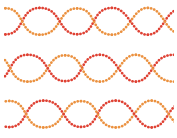
Available Kits

LoopSeq 16S Microbiome 24-plex Kit and 96-plex Kit
LoopSeq 16S & 18S Microbiome 24-plex Kit and 96-plex Kit

Simplify microbial metagenomics studies with LoopSeq Kits that deliver more comprehensive and accurate species identification and relative quantitation than any other method.

LoopSeq Transcriptome Kit

Perform UMI-based transcript counting and full-length mRNA sequencing with a single kit! Gain deeper insighs into the transcriptome at unparalleled levels of accuracy.



LoopSeq DNA Kit

Get long-read sequencing from any linear dsDNA! This kit delivers all the advantages of LoopSeq's long-read, low error rate technology with PCR products, genomes, and metagenomes.

Learn more about **LoopSeq** and our **Sequencing Services**—visit **LoopGenomics.com**

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