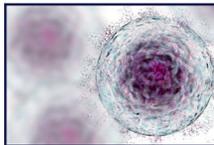


The Importance of Library Prep in the WGS Workflow

While there are several steps in whole-genome sequencing (WGS) workflows, library preparation is the keystone for high quality and reliable data. The Invitrogen™ Collibri™ PCR-Free PS DNA library prep kits for Illumina™ systems increases experimental success rates by providing visual feedback at each step while reducing the time needed to generate libraries.

Key Steps in Whole-Genome Sequencing



- Sample collection
- DNA extraction



- DNA quantification
- Library preparation



- Library quantification
- Clustering
- Sequencing



- Alignment
- Variant analysis
- Data interpretation
- Data reporting



How to determine the quality and quantity of your input DNA

Gel electrophoresis



Fluorescence-based detection



How to prepare a DNA library for WGS

- Fragment long genomic strands into optimal sizes
- Blunt the ends of fragments/remove overhangs
- Attach dAMP at 3' end
- Attach/ligate adaptor oligonucleotides at 3' and 5' ends of genomic DNA fragments
- Quantitate the library for specific sequencing application

How to increase efficiency in WGS workflow

Invitrogen Collibri PCR-Free PS DNA library prep kits for Illumina systems



Visual feedback



PCR-free from 500 ng of DNA