

FastTrack Whole-Genome Sequencing Services

Providing personalized customer service, generating industry-leading data analysis, and delivering rapid turnaround times for whole-genome sequencing.

Highlights

- Personalized Service and Support**
 Project managers guide researchers through the sequencing process, answer questions, and communicate updates
- Trusted Expertise**
 Industry-leading technology, experienced personnel, and extensive quality control deliver highly accurate data
- Robust and Scalable Process**
 High-throughput automation and an integrated laboratory information management system ensure scalability to manage large studies
- Rapid Turnaround Time**
 Integrated sample-to-data solutions provide fast and reliable whole-genome sequencing services

Introduction

Illumina FastTrack Services provide whole human genome sequencing services for various research applications. Using sequencing by synthesis (SBS) chemistry—the most widely adopted next-generation sequencing technology—these sample-to-data solutions deliver highly accurate results to provide researchers with a complete view of the human genome. Each researcher receives personalized attention and support throughout a sequencing project. FastTrack Services use automated and traceable processes to preserve data integrity, enabling researchers to focus on the next discovery.

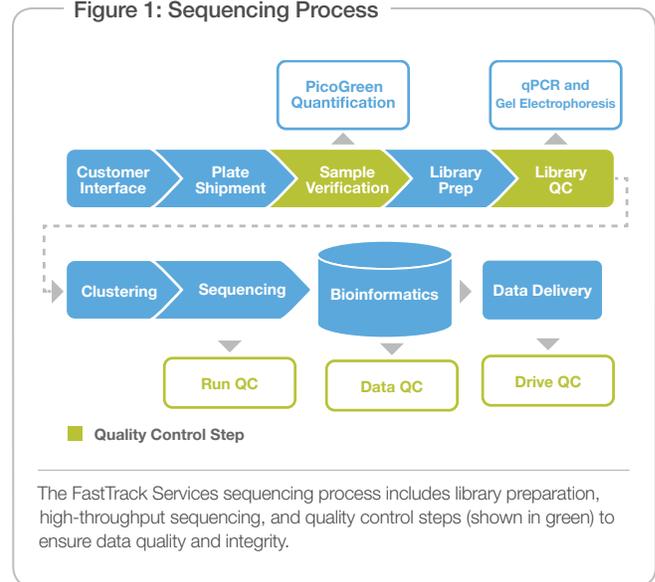
Personalized Service and Support

The FastTrack Services team includes expert scientists, project managers, and laboratory personnel with years of genomics experience. Committed to collaboration, Illumina project managers are available at any time during a project to answer questions, provide guidance, and communicate updates. Project managers track samples throughout the sequencing process, and scientific experts monitor sequencing runs to make sure that the highest data quality is delivered.

Proven Technology

FastTrack Services use SBS chemistry, a reversible terminator-based method that enables massively parallel sequencing and delivers the most accurate human genomic data in the industry. The high data quality results in few false positives and false negatives, so that researchers can be confident in the accuracy of their sequencing data. By coupling the latest innovations in SBS with integrated solutions, FastTrack Services deliver whole-genome sequencing data quickly.

Figure 1: Sequencing Process



The FastTrack Services sequencing process includes library preparation, high-throughput sequencing, and quality control steps (shown in green) to ensure data quality and integrity.

Sequencing Process

FastTrack Services include Whole-Genome Sequencing and Cancer Analysis Services, which use an automated, high-throughput process to achieve optimal sequencing results. From sample receipt through data analysis, all samples are treated with care and focused attention, and are tracked with an integrated laboratory information management system (LIMS) for positive sample tracking. Multiple quality control (QC) steps occur throughout the process to provide high confidence in the sequencing results (Figure 1). If a sample does not meet the quality requirements at any QC step, the sample is evaluated by a staff scientist and the project manager contacts the researcher to discuss available options.

Sample Submission

At the beginning of each sequencing project, an Illumina project manager contacts and guides the researcher through each step of the service process. During this collaborative first step, the project manager also answers questions, addresses concerns, and provides updates regarding the FastTrack Services sequencing workflow and analysis pipeline. When samples are ready for sequencing, the project manager sends the researcher barcoded plates and detailed guidelines for sample preparation and submission. The project manager also provides guidance about plate layout and safe shipping procedures to maintain sample integrity during transit.

Library Preparation

After arrival and visual inspection, each sample is quantified using an automated PicoGreen assay. This assay enables FastTrack Services



