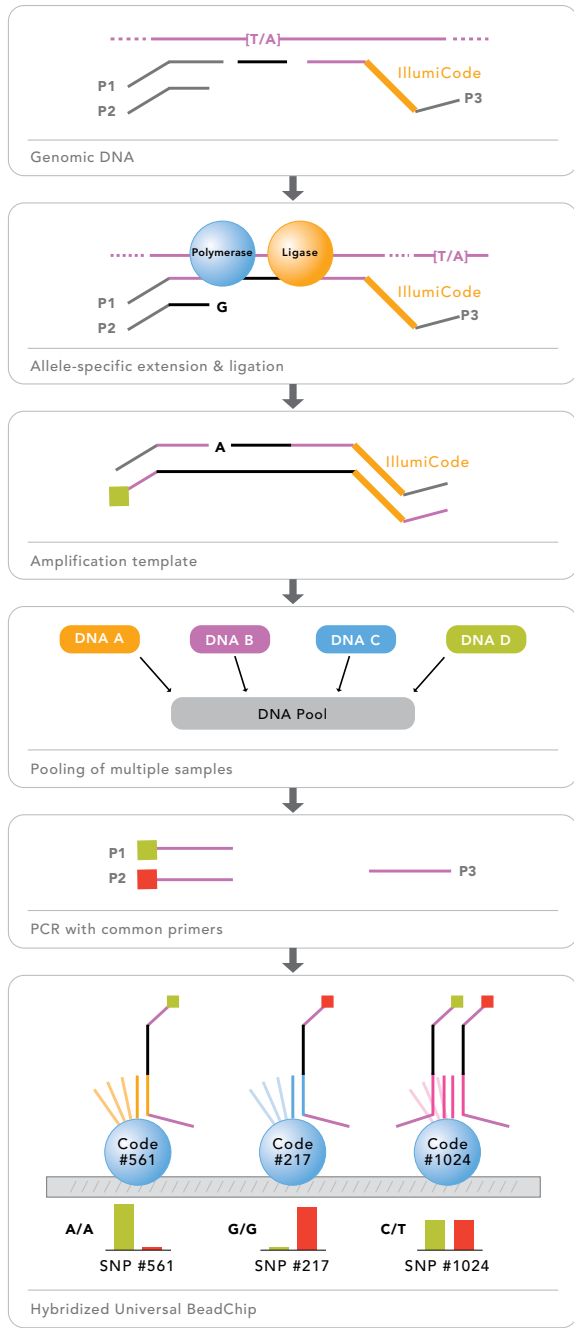


Figure 2: GoldenGate Indexing Assay Workflow



In the GoldenGate Indexing assay, a unique set of illuminaCodes is used to identify each sample, allowing multiple samples to be pooled prior to amplification. This, along with automation capabilities, greatly increases the assay throughput.

Illumina's integrated LIMS delivers state-of-the-art management and tracking to ensure the highest quality data, efficient data acquisition, and significant savings in time and lab resources. As a ready-to-use solution, Illumina LIMS includes the server hardware and software needed to accurately manage and enforce assay workflow. Illumina LIMS provides the excellent project management capabilities needed to effectively manage samples from receipt through analysis.

Positive sample tracking by Illumina LIMS is achieved by direct control of the automated liquid handling robots, ensuring samples are automatically processed and queued to the proper step and eliminating error due to manual mishandling. LIMS tracks time-stamped lab transactions with associated user information by offering user authentication either through Illumina LIMS or through existing Windows password authentication. In addition, LIMS uses a barcode system for accurate sample identification in downstream analysis. Illumina provides software updates to accommodate new product formats and workflows, saving the time and cost of in-house software development. By managing time-consuming and error-prone sample/data handling from beginning to end, the LIMS environment greatly increases confidence and efficiency in genotyping studies.

Reliable Analysis

GoldenGate Indexing Assay results can be analyzed in the genotyping module of GenomeStudio™ data analysis software. This module recognizes each illuminaCode and displays individual genotyping data for the pooled samples. In addition, GenomeStudio software features the ability to normalize raw data and perform clustering and automated genotyping calling.

Data Quality

GoldenGate Indexing Assays produce the same high-quality data as the original GoldenGate Assay. This ensures that important SNPs are captured and a high call accuracy is achieved (Table 1).

Summary

GoldenGate Indexing provides a fully automated, affordable assay for high-throughput low- to mid-plex genotype screening. Using a proven assay, researchers can now screen thousands of samples in just a few days, while still obtaining the high-quality data they require.

Additional Information

To learn how you can access the power of the GoldenGate Indexing Assay, visit www.illumina.com or contact us at the address below.

Figure 1: Specifications for the GoldenGate Indexing Assay

Parameter	Specification
Average Call Rate	> 99%
Reproducibility	> 99.9%
Mendelian Inconsistencies	< 0.1%

