Allegro Targeted Genotyping

www.nugen.com
www.lgcgroup.com/genomics

Efficient and cost-effective SNP interrogation

Allegro Targeted Genotyping provides a fast, scalable, cost-effective approach to perform targeted genotyping on a wide variety of organisms using next generation sequencing.

Using the patented SPET (Single Primer Enrichment Technology) approach to specifically target SNPs of interest, the system provides information-rich sequencing data that cannot be achieved by hybridization pulldown methods. For every on-target sequencing read, a SNP-specific data point is obtained. The result is unparalleled sequencing efficiency, leading to rapid scalability and the lowest cost per data point available.

Phenotypic assessment is costly and time-consuming; custom genotyping microarrays have fixed, inflexible content; NGS using selection by hybridization requires extensive paired-end sequencing. Allegro Targeted Genotyping solves all of these challenges.

Why use Allegro Targeted Genotyping?

Allegro Targeted Genotyping offers several unique features:

1. Low cost per data point.
2. Highly scalable multiplexing to enable high throughput SNP interrogation.
3. Interrogation of over 100,000 SNPs per sample in a single assay.
4. Complete customization to targeted SNPs, with rapid turnaround and flexibility to add new markers.
5. Use of patented SPET targeting approach for optimal efficiency.
6. Decreased sequencing cost by using single end reads.

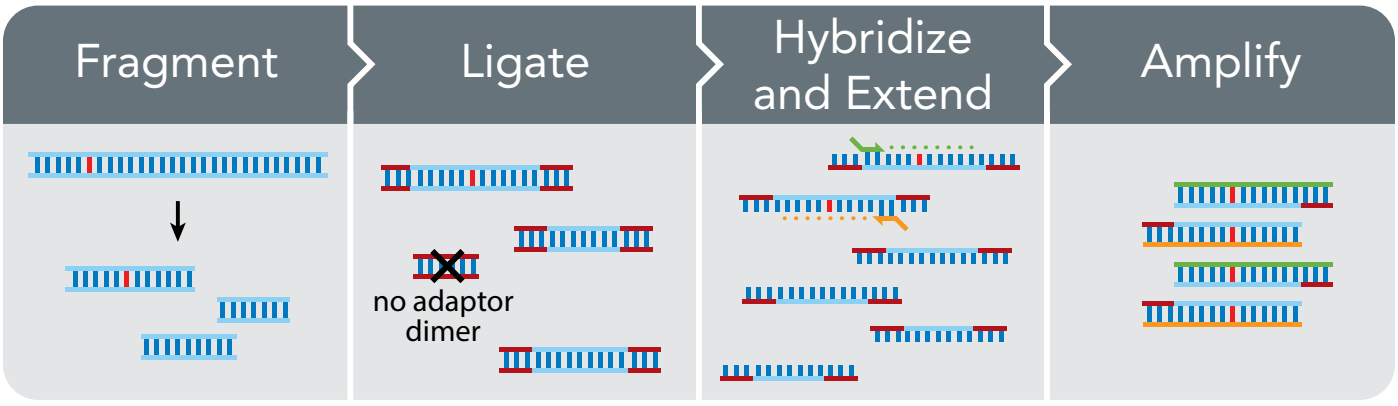

Figure 1. Allegro Targeted Genotyping is a complete end-to-end solution for targeted genotyping, with a simple easy to follow workflow.

NuGEN® LGC

Features

- 100 - >100,000 SNPs in a single design
- Low input of DNA
- Simple 24-hour protocol from DNA to library
- Integrated enzymatic fragmentation
- Scalable multiplexing of thousands of samples per sequencing run
- Short, single-end reads capture a SNP in each on-target read
- Highly flexible design process to easily add new content

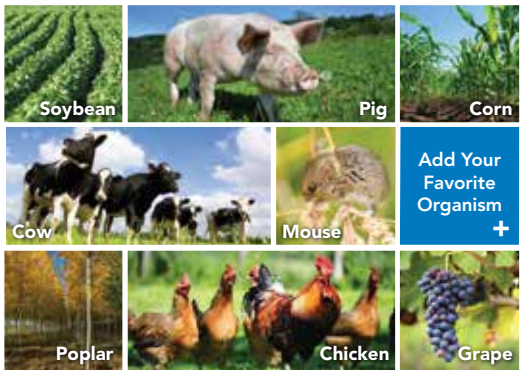

Figure 3. Custom panels can be designed for any sequenced genome. Expert scientists work with you to generate an optimal design.

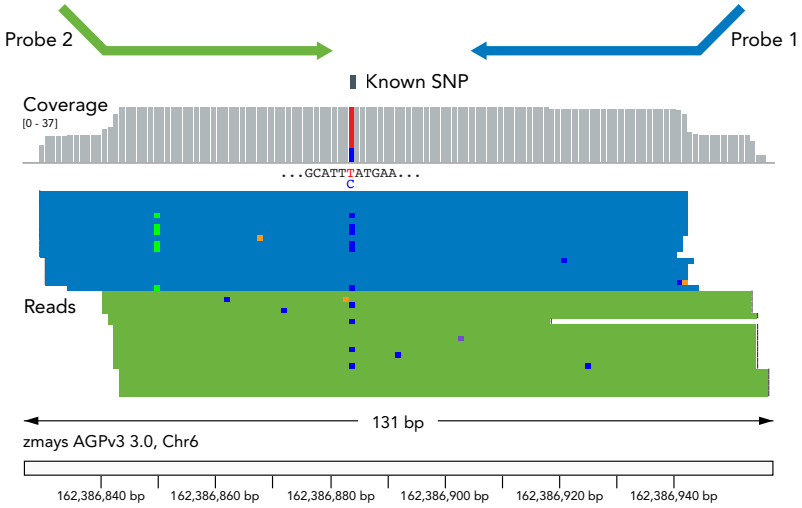

Figure 2. *Zea mays* custom panel designed with two probes for every SNP captures information from every read. Reads from both probes independently capture and confirm the presence of a SNP. Custom targeted panels enable high accuracy SNP-based genotyping.

	# Probes	Total Reads	Aligned (per sample)	On Target (per sample)
Single sample, 100 ng	32,922	1.4 M	91.1%	93.3%
24-plex Pooled samples	32,922/ea	1.52 M	93.3 ± 0.31%	95.8 ± 0.46%

Table 1. Robust enrichment for pooled samples ensures the most efficient use of sequencing space.

LGC part number	Description	Reactions per kit*
GEN-9600-001	Allegro Targeted Genotyping kit for up to 500 SNPs	192
GEN-9600-002	Allegro Targeted Genotyping kit for up to 1000 SNPs	192
GEN-9600-003	Allegro Targeted Genotyping kit for up to 2500 SNPs	192
GEN-9600-004	Allegro Targeted Genotyping kit for up to 5k SNPs	192
GEN-9600-005	Allegro Targeted Genotyping kit for up to 25k SNPs	192
GEN-9600-006	Allegro Targeted Genotyping kit for up to 50k SNPs	192

* LGC has optimized bulk kit sizes for high sample throughput applications. Please contact LGC to discuss bulk order sizes.

NuGEN LGC

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