

The proven Infinium® HD Assay powers the MaizeLD BeadChip, providing the highest call rates in the industry. SNPs on the MaizeLD BeadChip were subjected to rigorous functional testing across multiple lines to ensure strong performance (Table 1). Samples used for marker validation include European and North American mapping populations, and the Plant Variety Protection Act panel used to establish the EDV marker set.⁸ Validation of the MaizeLD BeadChip demonstrated a call rate of 99.4% across 280 samples. Reproducibility and Mendelian consistencies were 99.9%.

Parameter	Percent	Product Specification
Average Call Rate	99.4%	> 99%
Reproducibility	99.9%	> 99.9%
Mendelian Consistencies	99.9%	< 0.1%

The MaizeLD BeadChip provides an ideal foundation for maize breeding applications, with the ability to impute additional SNPs for custom projects. Researchers can add up to 70,000 custom markers onto the MaizeLD BeadChip to support marker-assisted selection, varietal identification, genetic purity assessment, and other applications. By adding markers of interest to the base SNP content, researchers can perform all maize genotyping applications on the same platform, reducing costs.

With a focused set of SNP content containing all relevant markers, the MaizeLD BeadChip minimizes per-sample costs for EDV testing. Focused analysis produces a smaller data set compared to broader approaches, enabling seed industry researchers to make accurate EDV decisions with minimal amounts of data.

The MaizeLD BeadChip is compatible with the iScan® System. This array scanner features high-performance lasers and powerful optics systems that enable rapid scan times and precise assay detection. In addition, optional automation and the Laboratory Information Management System (LIMS) lower costs by eliminating errors associated with manual processing. Illumina genotyping products can be accessed via Illumina FastTrack™ Genotyping Services or any Illumina CSPro® Service.

Developed through a collaboration between Illumina scientists and the seed industry, the MaizeLD BeadChip features 3047 evenly spaced SNPs for comprehensive EDV assessment. In addition,

Product	Catalog No.
MaizeLD BeadChip Kit (48 samples) Each package contains 2 BeadChips and reagents for processing 48 samples.	WG-455-1001
MaizeLD BeadChip Kit (288 samples) Each package contains 12 BeadChips and reagents for processing 288 samples.	WG-455-1002
MaizeLD BeadChip Kit (1152 samples) Each package contains 48 BeadChips and reagents for processing 1152 samples.	WG-455-1003
MaizeLD+ BeadChip Kit (48 samples) Each package contains 2 BeadChips with custom add-on content and reagents for processing 48 samples.	WG-455-1011
MaizeLD+ BeadChip Kit (288 samples) Each package contains 12 BeadChips with custom add-on content and reagents for processing 288 samples.	WG-455-1012
MaizeLD+ BeadChip Kit (1152 samples) Each package contains 48 BeadChips with custom add-on content and reagents for processing 1152 samples.	WG-455-1013

References

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