

SNP Type Assays

Custom primer design for high-throughput SNP genotyping

KEY BENEFITS

- **Cost savings—low startup and running costs**
- **Confidence—locus-specific primer sequences provided**
- **Flexibility—change targets on demand**

PRODUCTION SCALE GENOTYPING

Fluidigm® SNP Type™ assays provide a high-throughput, low-cost single-nucleotide polymorphism (SNP) genotyping solution that enables rapid assay design and polymorphism screening. The assays are based on allele-specific PCR SNP detection chemistry and combine the advantages of minimum experimental setup time and flexible assay choice with the reliability of Dynamic Array™ integrated fluidic circuits (IFCs).

Low costs and high reproducibility are critical for high sample throughput applications including production-scale SNP genotyping and screening studies. SNP Type assays employ tagged, allele-specific PCR primers and a common reverse primer. A universal probe set is used in every reaction, producing uniform fluorescence while significantly reducing both startup and running costs. The assays provide excellent results on Dynamic Array IFCs and are formatted to work directly with existing workflows. Unlike other vendors, we provide the locus-specific primer sequences with all orders, confirming target locations and assuring reproducibility.

SNP Type assays work seamlessly with the EP1™ and Biomark™ HD systems. When used in conjunction with the FC1™ cycler, rapid thermal cycling provides faster times to results and greatly increases sample throughput.

PRODUCT DETAILS

- Designed to target species with available sequence information
- Three- to four-week design and turnaround time with customer-provided sequences (Minimum of 12 assays per order)
- Access to locus-specific primer sequences assures reproducibility
- Compatible with specific target amplification (STA) protocol for improving results from samples of low quality and/or concentration, or from species with large genome sizes (>human); necessary STA primers provided

PRODUCT SPECIFICATIONS*

- Sample concentrations of ≥ 60 ng/ μ L of human genome size equivalent required
- Assay conversion rate >85%; success rate >80% for sequences with <65% GC content
- Average call rate >98%; average call accuracy >99% (high-quality DNA)
- Performance does not apply to SNPs in copy number variant regions

* TECHNICAL DEFINITIONS

Conversion rate: Ability to design an assay

Call rate: Ability to make an automatic software call and up to 10% manual call

Call accuracy: Matches True SNP, TaqMan®/HapMap

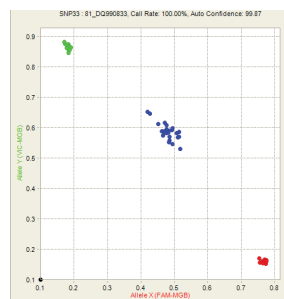
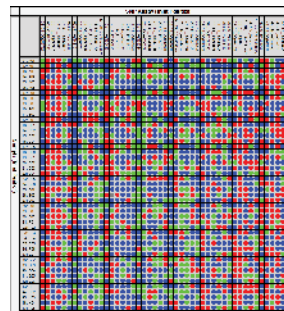
Success rate: Number of assays that meet defined performance/total assays designed

Workflow

1	2	3	4	5	6
ASSAY DESIGN	PRIME	LOAD	THERMAL CYCLE	READ	ANALYZE
Fluidigm SNP Type assays are designed for Dynamic Array IFCs.	Prime the IFC to prepare for samples and assays.	Place the IFC on the IFC controller to automatically set up reaction chambers.	Place the IFC onto the FC1 cycler and start the PCR protocol.	Place the IFC on the EP1 or Biomark HD for fluorescence detection.	Use analysis software to view and interpret results.

FLUIDIGM SOLUTIONS FOR GENETIC ANALYSIS

- **D3 Assay Design**
Online software to submit your targets for assay design
- **SNP Type assays**
Custom assays designed for the Biomark HD and EP1 System
- **Dynamic Array IFCs**
Consumable IFCs for high-throughput gene expression analysis and SNP genotyping
- **Digital Array™ IFCs**
Consumable IFCs for digital PCR
- **Biomark HD**
Integrated hardware/software for gene expression, genotyping and digital PCR using IFCs
- **EP1**
Integrated hardware/software for genotyping and digital PCR using IFCs
- **IFC controllers**
Integrated hardware/software for loading IFCs
- **FC1**
Integrated hardware/software for thermal cycling of IFCs
- **Software suite**
Analysis software for SNP genotyping analysis



Call map view for 48 cattle samples and 48 SNP Type™ assays (above); cluster plot for a typical SNP Type assay (below)

ORDERING INFORMATION

Product	P/N
SNP Type assays	ASY-GT
SNP Type Genotyping Reagent Kit	100-3673

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