appliedbiosystems

Agrigenomics solutions for companion animals

Choose from a variety of innovative technologies to analyze canine and equine genomes

From predesigned and validated content to custom solutions, our flexible technologies are designed to help accelerate your unique breeding and testing programs.

Microarrays

Applied Biosystems™ Axiom™ Canine Genotyping Array Sets A and B were designed in collaboration with the Canine Consortium. The arrays offer access to approximately 1.1 million markers that were discovered by the National Human Genome Research Institute of the National Institutes of Health. The content, distributed over two arrays, offers dense genotyping for validation and discovery of variants associated with specific phenotypes. All of the new content was discovered through high-quality sequencing of over 300 dog genomes. In addition, we offer an Applied Biosystems™ Axiom™ Canine High-Density Array, which contains more than 700,000 markers, featuring highly polymorphic SNP content and providing uniform genomic coverage across a diverse set of canine breeds.

ThermoFisher SCIENTIFIC

The novel Applied Biosystems™ Axiom™ Equine Genotyping Array supports a wide range of genotyping applications for equine research, and is the only array that can be used for genotyping 20 different breeds. It includes markers that were selected to maximize accuracy of imputation up to 1.8 million markers both within and across 20 breeds. An emphasis was placed on breeds with high commercial relevance.

Ordering information

Product	# SNPs	Quantity	Cat. No.
Canine			
Axiom Canine High-Density (HD) Genotyping Array	>700,000	1 plate containing 96 arrays	550869
Axiom Canine Genotyping Array Set A	>460,000	1 plate containing 96 arrays	550771
Axiom Canine Genotyping Array Set B	670,000	1 plate containing 96 arrays	550772
Equine			
Axiom Equine Genotyping Array	670,796	1 plate containing 96 arrays	550583

AgriSeq targeted GBS solutions

The Applied Biosystems™ AgriSeq™ targeted genotyping by sequencing (GBS) solution allows for high-throughput analysis of plant and animal genotypes in a flexible and cost-effective manner. Capable of generating up to 1.6 million genotypes/day from high-quality next-generation sequencing data at pennies per data point, AgriSeq- targeted GBS is the future of technology to help advance your plant and animal research. Leveraging a highly efficient multiplexed chemistry, hundreds to thousands of genetic loci can be simultaneously targeted and efficiently amplified in a single reaction. Libraries are then processed for next-generation sequencing, where hundreds of samples can be barcoded and sequenced in the same run. Customized panels are expertly designed to target your relevant markers, offering:

- Consistent performance across samples with high marker call rates
- Fast workflow for cost-effective high-throughput genotyping

Ordering information

Product	Quantity	Cat. No.
Canine		
AgriSeq HTS Library Kit	9,600 reactions	A34143
AgriSeq HTS Library Kit	960 reactions	A34144
Custom Canine Parentage Panel—200 SNPs	Varies	Contact sales representative
Custom Canine Genetic Defect Panel—161 markers	Varies	Contact sales representative

STR parentage kits

Employing short tandem repeats (STRs), our canine and equine STR genotyping kits offer a complete solution for animal parentage typing and genotyping. STRs, also referred to as microsatellites, are highly polymorphic markers evenly distributed across a genome.

Compatible with Applied Biosystems™ genetic analyzers, our genotyping kits incorporate a proprietary PCR process that employs fluorescent dye–labeled primers to assist with the amplification of microsatellite markers.

applied biosystems

Ordering information

Product	No. of markers	Quantity	Cat. No.
Canine			
Canine ISAG STR Parentage Kit (2014)	22	500 reactions	A36139
Canine ISAG STR Parentage Kit (2014)	22	100 reactions	A36138
Canine Genotypes Panel 2.1 Kit	19	100 reactions	F864S
Canine Genotypes Panel 1.1 Kit	19	500 reactions	F860L
Canine Genotypes Panel 1.1 Kit	19	100 reactions	F860S
StockMarks for Dogs Genotyping Kit	10	100 reactions	4307481
Equine			
Equine Genotypes Panel 1.1 Kit	17	500 reactions	F850L
Equine Genotypes Panel 1.1 Kit	17	100 reactions	F850S
StockMarks for Horses 17-Plex Genotyping Kit	17	100 reactions	4336405

Custom TaqMan SNP Genotyping Assays

These assays provide a highly flexible technology for the detection of polymorphisms within any genome. Create your own assays by submitting target sequences to our secure assay design pipeline using the Applied Biosystems™ Custom TaqMan® Assay Design Tool. Our design pipeline has successfully generated millions of assay designs by utilizing heuristic rules deduced from both manufacturing and assay performance data. Applied Biosystems™ TaqMan® Assays can be run on any of our real-time PCR instruments using our highly robust chemistry, the Applied Biosystems™ TaqPath™ ProAmp™ Master Mix, and a simple 5-minute sample prep lysis reagent using the Applied Biosystems™ DNA Extract All Reagents Kit.

Ordering information

Product	Quantity	Cat. No.
Custom TaqMan SNP Genotyping Assays, large-scale	12,000 (5 µL) reactions	4332076
Custom TaqMan SNP Genotyping Assays, medium-scale	5,000 (5 µL) reactions	4332075
Custom TaqMan SNP Genotyping Assays, small-scale	1,500 (5 µL) reactions	4332077
TaqPath ProAmp Master Mix	1 x 50 mL	A30867
TaqPath ProAMP Master Mix	2 x 10 mL	A30871
TaqPath ProAmp Master Mix	1 x 10 mL	A30866
TaqPath ProAmp Master Mix	1 x 1 mL	A30865
DNA Extract All Reagents Kit	200 mL	4402599

Find out more at **thermofisher.com/agrigenomics**

ThermoFisher SCIENTIFIC

For Research Use Only. Not for use in diagnostic procedures. AgriSeq is restricted for use with plants, agricultural animals or companion animals only. This product is not for use with human samples and/or in commercial applications. © 2017 Thermo Fisher Scientific Inc. All rights reserved. All trademarks are the property of Thermo Fisher Scientific and its subsidiaries unless otherwise specified. TaqMan is a registered trademark of Roche Molecular Systems, Inc., used under permission and license. **COL21897 0617**