Data Sheet

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GeneChip® Canine Genome 2.0 Array

***Canis familiaris* is an important model organism for biomedical research of human diseases. The GeneChip® Canine Genome 2.0 Array enables researchers to interrogate 18,000 *C. familiaris* mRNA/EST-based transcripts and more than 20,000 non-redundant predicted genes.**

This array was created in collaboration with leading canine researchers through the Affymetrix GeneChip® Consortia Program and was designed based on content from UniGene, GenBank® mRNAs, and the Boxer Dog Genome Project (BROADD1) gene predictions.

Applications

The Canine Genome 2.0 Array is the second-generation array for expression profiling in dogs. With the completion of the canine genome assembly, the Canine 2.0 Array incorporates gene models and expressed sequences to comprehensively represent the dog transcriptome.

Array profile

The Canine Genome 2.0 Array is a 64-format, 11 µm array that contains 11 probe pairs per probe set. The sequence information for this array was selected from public data sources including UniGene, GenBank® mRNAs, and gene predictions derived from the BROADD1 Prediction Set (Broad Institute), downloaded from European Bioinformatics Institute (EBI).

The array contains more than 42,800 *C. familiaris* probe sets to monitor gene expression for more than 18,000 *C. familiaris* mRNA/EST-based transcripts and more than 20,000 non-redundant predicted genes.

Instrument/software requirements

- GeneChip® Scanner 3000
- Affymetrix® GeneChip® Command Console® Software (AGCC)

Specifications

Number of probe sets	42,860 canine probe sets + 10 canine control probe sets
Number of transcripts	>18,000 canine EST/mRNA-based transcripts + >20,000 non-redundant canine gene predictions
UniGene clusters	~17,200 canine UniGene clusters
Number of arrays in set	One
Array format	64
Feature size	11 µm
Oligonucleotide probe length	25-mer
Probe pairs per sequence	11
Hybridization controls	*bioB, bioC, bioD* from *Escherichia coli* and *cre* from P1 bacteriophage
Poly-A controls	*dap, lys, phe, thr, trp* from *Bacillus subtilis*
Housekeeping/control genes	beta-actin, elongation factor 1, GAPDH Test3 controls: actin, beta-3-adrenergic receptor, glucose-6-phosphatase, GAPDH, cytochrome P450
Detection sensitivity	1:100,000*

*As measured by detection in comparative analysis between a complex target containing spiked control transcriptions and a complex target with no spikes.

Ordering information

Part number	Description
GeneChip® Canine Genome 2.0 Array	
900725	Contains 2 arrays
900726	Contains 6 arrays
900727	Contains 30 arrays

Supporting products

Part number	Description
GeneChip® 3′ IVT Express Kit	
901228	10 reactions
901229	30 reactions

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