Data Sheet

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GeneChip® Porcine Genome Array

The domestic pig, *Sus scrofa*, is an important model organism for biomedical research of human disease conditions, as well as for agricultural research because of its worldwide importance as a food source. The GeneChip® Porcine Genome Array is an important tool for studying gene expression in the porcine animal model.

Applications

Domestic pigs are an important food source and, because of their many anatomical and physiological similarities to humans, are also used extensively for medical research. In particular, the pig makes an excellent research model for wound repair, reproductive diseases, cancer, cardiovascular disease, and diabetes. Gene expression analysis is also important in livestock research. Gene expression profiles have been useful in the study of the effects of biotic and abiotic stress, pathogen interaction, and other quantitative traits in food organisms, with the ultimate goal of strain improvement.

Array profile

The Porcine Genome Array provides comprehensive coverage of the *S. scrofa* transcriptome. The array contains 23,937 probe sets that interrogate approximately 23,256 transcripts from 20,201 *S. scrofa* genes. The sequence information for this array was selected from public data sources including UniGene GenBank® mRNAs, and GenBank porcine mitochondrial and rRNA sequences.

The Porcine Genome Array is a 100-format 11 µm array design and contains 11 probe pairs per probe set.

Instrument/software requirements

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

Specifications

Number of probe sets, *S. scrofa*	23,937
Total number of probe sets including species-specific controls	23,973
Number of transcripts, *S. scrofa*	23,256
Number of arrays in set	One
Array format	100
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	Porcine genes from Test3 Array: alpha-actin, angiotesin binding protein, CTLA4, erythropoietin receptor, GAPDH, inflammatory response protein 6, leptin. Additionally, there are selected control probe sets for beta actin (ACTB), GAPDH, eukaryotic elongation factor 1 alpha 1 (EEF1A1).
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® Porcine Genome Array	
900623	Contains 2 arrays
900624	Contains 6 arrays
900625	Contains 30 arrays

Supporting products

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

Affymetrix, Inc. Tel: +1-888-362-2447 ■ **Affymetrix UK Ltd.** Tel: +44-(0)-1628-552550 ■ **Affymetrix Japan K.K.** Tel: +81-(0)3-6430-4020
Panomics Products Tel: +1-877-PANOMICS www.panomics.com ■ **USB Products** Tel: +1-800-321-9322 www.usb.affymetrix.com

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