Affymetrix® Package Insert

GeneChip® Mouse Gene 1.0 ST Array

Intended Use

The GeneChip® Mouse Gene 1.0 ST Array enables whole-genome gene-level expression studies for well-characterized genes. It is a single GeneChip-brand array comprised of over 750,000 unique 25-mer oligonucleotide features constituting over 28,000 gene-level probe sets.

The design of the Mouse Gene 1.0 ST Array is based primarily on a subset of probes on the GeneChip® Mouse Exon 1.0 ST Array that maps to well-supported exons of known genes. Discovery content based solely on Expressed Sequence Tags (ESTs) and RefSeq XMs is not interrogated by the Mouse Gene 1.0 ST Array. However, predicted ENSEMBL EnsGene transcripts are included along with other EnsGene content.

The array was based on sequences and gene annotations obtained from the following sources and used to group probes into gene-level probe sets. In some cases these sequences were used to select additional new probes not present on the Mouse Exon 1.0 ST Array.

- The February 2006 mouse genome sequence (UCSC mm8, NCBI v36).
- RefSeq NM (curated and provisional; not predicted) mRNA sequences (19,719 sequences) current to April 3, 2007.
- Genbank® complete coding sequence mRNAs (35,257 sequences) current to November 13, 2006.
- Mouse Ensembl transcripts current to April 3, 2007 (35,882 transcripts).
- Syntenically mapped full-length mRNAs and RefSeq NMs from human (68,820 sequences) and rat (20,409 sequences).

Oligonucleotide probes are synthesized *in situ* complementary to each corresponding sequence. For expression analysis, the samples need to be amplified, and the targets labeled in the sense orientation for hybridization to the arrays.

GeneChip® arrays are for research use only and are not intended for use in diagnosis of disease.

Precautions

1. GENECHIP PROBE ARRAYS ARE FOR RESEARCH USE ONLY; NOT FOR DIAGNOSTIC PROCEDURES.
   a. Avoid microbial contamination, which may cause erroneous results.
2. **WARNING: All biological specimens and materials with which they come into contact should be handled as if capable of transmitting infection and disposed of with proper precautions in accordance with federal, state, and local regulations. This includes adherence to the OSHA Bloodborne Pathogens Standard (29 CFR 1910.1030) for blood-derived and other samples governed by this act. Never pipet by mouth. Avoid specimen contact with skin and mucous membranes.**
3. **CAUTION:** Exercise standard precautions when obtaining, handling, and disposing of potentially carcinogenic reagents.
4. Exercise care to avoid cross-contamination of samples during all steps of this procedure, as this may lead to erroneous results.
5. Use powder-free gloves whenever possible to minimize introduction of powder particles into sample or probe array cartridges.

Critical Specifications	
Number of Arrays	1
Array Format	169
Feature Size	5 µm
Total Number of Distinct Probes	770,317
Oligonucleotide Probe Length	25-mer probes
Required Orientation of Labeled Targets to be Hybridized to the Array	Sense target
Resolution (number of probes per gene)	27 (median)
Estimated Number of Genes	28,853
Gene-level Probe Sets with ENSEMBL Support	27,543
Gene-level Probe Sets with Putative Full-length Transcript Support (GenBank® and RefSeq)	19,434
Fluidics Protocol	www.affymetrix.com/support/technical/fluidics_scripts.affx
Hybridization Volume	80 µL. The total fill volume of the cartridge is 100 µL.
Controls	
Positive Control (constitutively expressed genes)	1,324 exon-level probe sets from putative constitutive genes
Negative Control	5,222 putative intron-level probe sets from putative constitutive genes
Hybridization Controls	*bioB, bioC, bioD, cre*
Background Probes	Antigenomic Set
Poly-A Controls	*dap, lys, phe, thr*
Sample Input	
RNA Sample Input with Ambion WT Expression Kit	50 ng
Library Files	
AGCC Library Files	MoGene-1_0-st-v1 file set (or newer)
Analysis Library Files	MoGene-1_0-st-v1-r3 file set (or newer)

Accessory Files

Assay Manuals

The following documentation is required for using the Ambion® WT Expression Kit and the GeneChip® WT Terminal Labeling and Controls Kit with Exon and Gene 1.0 ST Arrays:

- *The Ambion® WT Expression Kit For Affymetrix® GeneChip® Whole Transcript (WT) Expression Arrays* (P/N 4425209).
- *GeneChip® WT Terminal Labeling and Hybridization User Manual for use with the Ambion® WT Expression Kit* (P/N 702808).
- *GeneChip® Expression Wash, Stain and Scan User Manual For Cartridge Arrays* (P/N 702731).

The Affymetrix GeneChip manuals are available at www.affymetrix.com. The Ambion manual is available at www.ambion.com.

Fluidics

The fluidics scripts can be downloaded from the Affymetrix web site. Additional information, including lists of steps in the fluidics protocol, can be found in the *GeneChip® Expression Wash, Stain and Scan User Manual*.

Library Files

Library files contain information about the probe array design characteristics, probe use and content, and scanning and analysis parameters. These files are unique for each probe array. Additional information can be located under the specific array product at www.affymetrix.com.

Ordering Information

P/N	Product Name	Description
Arrays		
901168	GeneChip® Mouse Gene 1.0 ST Array	2 Arrays
901169	GeneChip® Mouse Gene 1.0 ST Array	6 Arrays
901171	GeneChip® Mouse Gene 1.0 ST Array	30 Arrays
Supporting Products		
4411973	Ambion® WT Expression Kit[1]	10 Rxns
4411974	Ambion® WT Expression Kit[1]	30 Rxns
901525	GeneChip® WT Terminal Labeling and Controls Kit[2] Contains: ■ GeneChip® WT Terminal Labeling Kit (P/N 900670, 10 Rxn) ■ GeneChip® Poly-A Control Kit (P/N 900433) ■ GeneChip® Hybridization Control Kit (P/N 900454)	10 Rxns
901524	GeneChip® WT Terminal Labeling and Controls Kit[2] Contains: ■ GeneChip® WT Terminal Labeling Kit (P/N 900671, 30 Rxn) ■ GeneChip® Poly-A Control Kit (P/N 900433) ■ GeneChip® Hybridization Control Kit (P/N 900454)	30 Rxns
900720	GeneChip® Hybridization, Wash, and Stain Kit	30 Rxns

1. *Available for purchase at www.Ambion.com.*
2. *Individual kit components are available for purchase separately.*

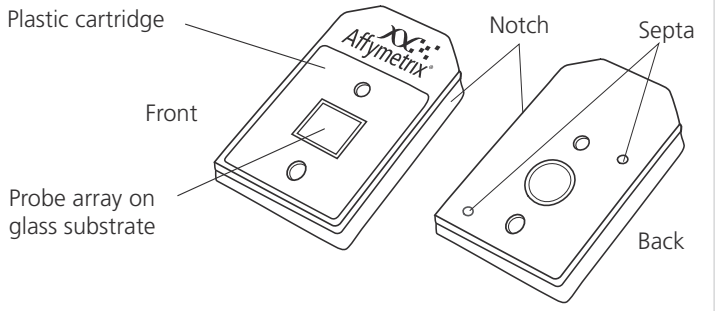
Affymetrix® products can be purchased directly from Affymetrix in the United States, and many European and Asian countries. For all other territories, please view a list of our distribution partners, which can be located at: www.affymetrix.com/site/contact/index.affx.

Storage, Handling and Stability

The probe array consists of a square glass substrate mounted in a plastic cartridge (Figure 1). The glass contains an array of oligonucleotides that, when mounted, is on the inner glass surface. A chamber in the plastic housing directly under the glass acts as a reservoir where hybridization and washing occur.

Although the inner glass surface of the probe array is protected, any contamination or scratches on the outer surface of the glass can compromise the accuracy of the scan. Avoid touching the surface of the glass with your fingers. Skin oils and other substances, such as lotions or ink, can fluoresce. If the surface of the glass is noticeably dirty, it can be carefully cleaned with a non-abrasive laboratory tissue.

Figure 1. GeneChip® Probe Array



The GeneChip® probe arrays should be stored at 2° to 8°C. Refer to the expiration date on the package label. Do not use probe arrays or reagents after the expiration date.

Contact Information

Affymetrix, Inc.
3420 Central Expressway
Santa Clara, CA 95051 USA
E-mail: support@affymetrix.com
Tel: 1-888-362-2447 (1-888-DNA-CHIP)
Fax: 1-408-731-5441

Affymetrix UK Ltd
Voyager, Mercury Park,
Wycombe Lane, Wooburn Green,
High Wycombe HP10 0HH
United Kingdom
E-mail: supporteurope@affymetrix.com
UK and Others Tel: +44 (0) 1628 552550
France Tel: 0800919505
Germany Tel: 01803001334
Fax: +44 (0) 1628 552585

Affymetrix Japan, K. K.
ORIX Hamamatsucho Bldg, 7F
1-24-8 Hamamatsucho, Minato-ku
Tokyo 105-0013, Japan
Tel: +81-3-6430-4020
Fax: +81-3-6430-4021
E-mail: supportjapan@affymetrix.com

Please visit our web site for international distributor contact information
www.affymetrix.com

Limited License

Subject to the Affymetrix terms and conditions that govern your use of Affymetrix products, Affymetrix grants you a non-exclusive, non-transferable, non-sublicensable license to use this Affymetrix product only in accordance with the manual and written instructions provided by Affymetrix. You understand and agree that except as expressly set forth in the Affymetrix terms and conditions, that no right or license to any patent or other intellectual property owned or licensable by Affymetrix is conveyed or implied by this Affymetrix product. In particular, no right or license is conveyed or implied to use this Affymetrix product in combination with a product not provided, licensed or specifically recommended by Affymetrix for such use.

Patents

Products may be covered by one or more of the following patents: U.S. Patent Nos. 5,445,934; 5,744,305; 5,945,334; 6,140,044; 6,399,365; 6,420,169; 6,551,817; 6,733,977 and D430,024 and other U.S. or foreign patents. Products are manufactured and sold under license from OGT under 5,700,637 and 6,054,270.

Trademarks

Copyright