

GeneChip® Mouse Tiling 2.0R Array Set

For studying genome-wide protein/DNA interactions in chromatin immunoprecipitation experiments.



INTENDED USE

The GeneChip® Mouse Tiling 2.0R Array Set is a seven-array set designed for chromatin immunoprecipitation (ChIP) experiments. Sequences used in the design of the Mouse Tiling 2.0R Array Set were selected from NCBI mouse genome assembly (Build 33). Repetitive elements were removed by Repeat-Masker. The Mouse Tiling 2.0R Array Set is available either as a whole-genome set of seven arrays (P/N 900852), or individual arrays from the set may be purchased separately.

Oligonucleotide probes are synthesized *in situ* complementary to each corresponding sequence. Probes are tiled at an average resolution of 35 base pairs, as measured from the central position of adjacent 25-mer oligos, leaving a gap of approximately 10 base pairs between probes. Each array in the set contains over 6.5 million perfect match probes to specifically interrogate genomic regions.

GeneChip probe arrays are for research use only and not intended for use in diagnosis of disease. Refer to the Affymetrix® *Chromatin Immunoprecipitation Assay Protocol* (P/N 702238) for procedures regarding target preparation, target hybridization, fluidics station setup, probe array scanning, and data analysis.

INSTRUMENTATION AND SOFTWARE REQUIRED

1. GeneChip® Scanner 3000 7G
2. GeneChip® Operating Software (GCOS) version 1.3 or higher
3. GeneChip® Fluidics Station 400 or higher

RECOMMENDED ANALYSIS SOFTWARE

1. Affymetrix® Tiling Array Software (TAS)
2. Integrated Genome Browser

TAS and the Integrated Genome Browser are available for download from www.affymetrix.com

Critical Specifications

Feature Size	5 µm
Tiling Resolution	35 base pair
Hybridization Controls Tiling mRNA controls	<i>bioB</i> , <i>bioC</i> , <i>bioD</i> , <i>cre</i> <i>B. subtilis</i> : <i>dap</i> , <i>lys</i> , <i>phe</i> , <i>thr</i> <i>A. thaliana</i> : CAB, RCA, RBCL, LTP4, LTP6, XCP2, RCP1, NAC1, TIM, PRKASE
Array Format	49
Fluidics Protocol	Fluidics Station 450: FS450_0001 Fluidics Station 400: EukGE-WS2v5, and manually add Array Holding Buffer to the cartridge prior to scanning
Hybridization Volume	200 µL. The total fill volume of the cartridge is 250 µL.
Library Files	Mm35b_P01R_v01, Mm35b_P02R_v01, Mm35b_P03R_v01, Mm35b_P04R_v01, Mm35b_P05R_v01, Mm35b_P06R_v01, Mm35b_P07R_v01

ACCESSORY FILES

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 Affymetrix® *Chromatin Immunoprecipitation Assay Protocol*.

Library Files

Library files contain information about the probe array design layout and other characteristics, probe use and content, and scanning and analysis parameters. Tiling arrays are accompanied by .bmap files which associate each probe on the array with the genomic location. These files are unique for each probe array type. The library files can be downloaded from the following URL: www.affymetrix.com/support/technical/libraryfilesmain.affx.

ORDERING INFORMATION

P/N	Product Name	Description
ARRAYS		
900852	GeneChip® Mouse Tiling 2.0R Array Set Whole genome set	7 Arrays
900894	GeneChip® Mouse Tiling 2.0R A Array Covers chromosomes 1, 9, 19	6 Arrays
900896	GeneChip® Mouse Tiling 2.0R B Array Covers chromosomes 2, Mitochondria, X, Y, and unassigned regions	6 Arrays
900897	GeneChip® Mouse Tiling 2.0R C Array Covers chromosomes 3, 7, 18	6 Arrays
900895	GeneChip® Mouse Tiling 2.0R D Array Covers chromosomes 4, 11, 17	6 Arrays
900898	GeneChip® Mouse Tiling 2.0R E Array Covers chromosomes 5, 12, 15	6 Arrays
900899	GeneChip® Mouse Tiling 2.0R F Array Covers chromosomes 6, 8, 16	6 Arrays
900900	GeneChip® Mouse Tiling 2.0R G Array Covers chromosomes 10, 13, 14	6 Arrays
SUPPORTING PRODUCTS		
900301	Control Oligo B2 (also included in Hybridization Control Kit)	Sufficient for 30 Reactions

Affymetrix® products can be purchased directly from Affymetrix in the United States, many European countries, and many 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

PRECAUTIONS

1. GENECHIP PROBE ARRAYS ARE FOR RESEARCH USE ONLY; NOT FOR DIAGNOSTIC PROCEDURES.
2. Avoid microbial contamination, which may cause erroneous results.
3. **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.
4. **CAUTION:** Exercise standard precautions when obtaining, handling, and disposing of potentially carcinogenic reagents.
5. Exercise care to avoid cross-contamination of samples during all steps of this procedure, as this may lead to erroneous results.
6. Use powder-free gloves whenever possible to minimize introduction of powder particles into sample or probe array cartridges.

STORAGE, HANDLING, AND STABILITY

The GeneChip 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.

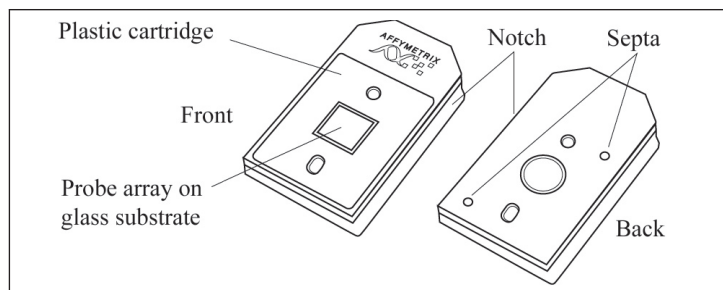


Figure 1. GeneChip® Probe Array

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

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PATENTS

Products may be covered by one or more of the following patents and/or sold under license from Oxford Gene Technology: U.S. Patent Numbers 5,445,934; 5,700,637; 5,744,305; 5,945,334; 6,054,270; 6,140,044; 6,261,776; 6,291,183; 6,346,413; 6,399,365; 6,420,169; 6,551,817; 6,610,482; 6,733,977; and EP 619 321; 373 203 and other U.S. or foreign patents.

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