


# GeneChip™ Human Promoter 1.0R Array

Catalog Number 900776

Pub. No. 702086 Rev. 3

 **WARNING!** Read the Safety Data Sheets (SDSs) and follow the handling instructions. Wear appropriate protective eyewear, clothing, and gloves. Safety Data Sheets (SDSs) are available from [thermofisher.com/support](http://thermofisher.com/support).

## Product use

The Applied Biosystems™ GeneChip™ Human Promoter 1.0R Array is designed for chromatin immunoprecipitation (ChIP) experiments. The GeneChip™ Human Promoter 1.0R Array is a single array comprised of over 4.6 million probes tiled through over 25,500 human promoter regions.

Sequences used in the design of the GeneChip™ Human Promoter 1.0R Array were selected from NCBI human genome assembly (Build 34). Repetitive elements were removed by Repeat Masker. Promoter regions were selected using sequence information from 35,685 ENSEMBL genes (version 21\_34d May 14, 2004), 25,172 Refseq mRNAs (NCBI GenBank™ February 7, 2004), and 47,062 complete-CDS mRNA (NCBI GenBank™ December 15, 2003). The probes selected for the GeneChip™ Human Promoter 1.0R Array are a subset of the probes used in the whole genome ChIP array set, the GeneChip™ Human Tiling 2.0R Array Set (Cat. No. 900772).

Oligonucleotide probes are synthesized *in situ* complementary to each corresponding sequence. Probes are tiled at an average resolution of 35 bp, as measured from the central position of adjacent 25-mer oligos, leaving a gap of approximately 10 bp between probes. Each promoter region covers approximately 7.5 kb upstream through 2.45 kb downstream of 5' transcription start sites. For over 1,300 cancer-associated genes, coverage of promoter regions was expanded to include additional genomic content; for these selected genes total cover-age spans from 10 kb upstream through 2.45 kb downstream of transcriptional start sites. The array interrogates regions proximal to transcription start sites and contains probes for approximately 59% of CpG islands annotated by UCSC in NCBI human genome assembly (Build 34).

Refer to the *Chromatin Immunoprecipitation Assay User Guide* (Pub. No. 702238) for procedures regarding target preparation, target hybridization, fluidics station setup, probe array scanning, and data analysis.

## Instrumentation and software required

- GeneChip™ Scanner 3000 7G
- GeneChip™ Fluidics Station 450
- GeneChip™ Hybridization Oven 645
- GeneChip™ Command Console™ (GCC) software

## Recommended tiling analysis software

- Applied Biosystems™ Tiling Analysis Software
- Integrated Genome Browser

The Tiling Analysis Software is available for download from our website. The Integrated Genome Browser, a visual analytics platform for genomics, is available as a free download from the <http://bioviz.org> website.

## Critical specifications

Item	Specification
Feature size	5 µm
Tiling resolution	35 base pair
Array format	64
Hybridization controls	<i>bioB</i> , <i>bioC</i> , <i>bioD</i> , and <i>cre</i>
Tiling mRNA controls	<i>dap</i> , <i>lys</i> , <i>phe</i> , <i>thr</i> , CAB, RCA, RBCL, LTP4, LTP6, XCP2, RCP1, NAC1, TIM, PRKASE
Hybridization volume	200 µL. The total fill volume of the cartridge is 250 µL.
Fluidics protocol	Fluidics Station 450: FS450_0001 Fluidics Station 400: EukGE-WS2v5, and add Array Holding Buffer to the cartridge manually prior to scanning.
Library files	Hs_PromPR_v01

## Accessory files

### Fluidics scripts

The fluidics script used depends on the array type, labeling protocol, and reagents used for cartridge processing. Refer to the GeneChip Fluidics Station Scripts support page to determine which fluidics script is appropriate for your application. The fluidics scripts can be downloaded from our website. Additional information, including lists of steps in the fluidics protocol, can be found in the *Chromatin Immunoprecipitation Assay User Guide* (Pub. No. 702238).

### 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 on our website.

## Ordering information

Unless otherwise indicated, all materials are available through [thermofisher.com](http://thermofisher.com). MLS: Fisher Scientific ([fisherscientific.com](http://fisherscientific.com)) or other major laboratory supplier.

Product	Description	Cat. No.
GeneChip™ Human Promoter 1.0R Array	6 arrays	900776

## Storage, handling, and stability

This cartridge array consists of a square glass substrate mounted in a plastic cartridge. 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 nonabrasive laboratory tissue.

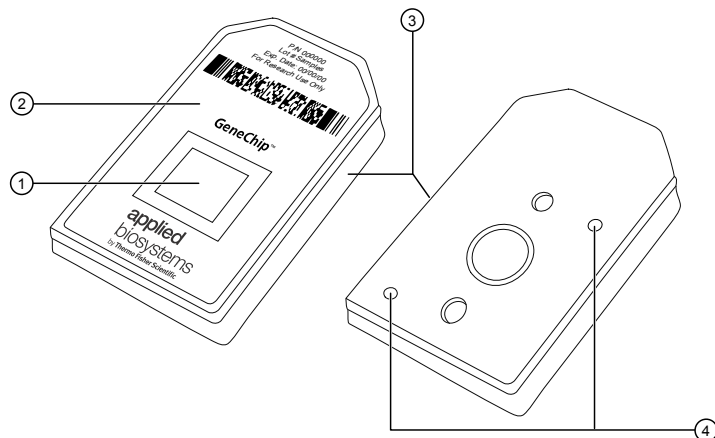


Fig. 1 Cartridge array.

- ① Probes on a glass substrate
- ② Plastic cartridge
- ③ Notch
- ④ Septa

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

## Customer and technical support

Visit [thermofisher.com/support](http://thermofisher.com/support) for the latest in services and support, including:

- Worldwide contact telephone numbers
- Product support, including:
  - Product FAQs
  - Software, patches, and updates
  - Training for many applications and instruments
- Order and web support
- Product documentation, including:
  - User guides, manuals, and protocols
  - Certificates of Analysis
  - Safety Data Sheets (SDSs; also known as MSDSs)

**Note:** For SDSs for reagents and chemicals from other manufacturers, contact the manufacturer.

## Limited product warranty

Life Technologies Corporation and/or its affiliate(s) warrant their products as set forth in the Life Technologies' General Terms and Conditions of Sale found on Life Technologies' website at [www.thermofisher.com/us/en/home/global/terms-and-conditions.html](http://www.thermofisher.com/us/en/home/global/terms-and-conditions.html). If you have any questions, please contact Life Technologies at [www.thermofisher.com/support](http://www.thermofisher.com/support).



Affymetrix Pte Ltd | 7 Gul Circle #2M-01 | Keppel Logistics Building | Singapore 629563

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**Revision history:** Pub. No. 702086

Revision	Date	Description
3	17 November 2017	Update document to current template.
2	29 June 2009	Baseline for revision history.

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