


# GeneChip™ Rat Genome 230 2.0 Array

Catalog Numbers 900505, 900506, and 900507

Doc. Part No. 701564 Pub. No. MAN0017677 Rev. A.0

 **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™ Rat Genome 230 2.0 Array (Rat 230 2.0) is made up of a single GeneChip™ array comprising over 31,000 probe sets representing approximately 28,700 well-substantiated rat genes. All probe sets represented on the GeneChip™ Rat Expression Set 230 are identically replicated on the GeneChip™ Rat Genome 230 2.0 Array. Sequences used in the design of the array were selected from GenBank™, dbEST, and RefSeq. The sequence clusters were created from the UniGene database (Build 99, June 2002) and then refined by analysis and comparison with the publicly-available draft assembly of the rat genome from the Baylor College of Medicine Human Genome Sequencing Center (June 2002).

Oligonucleotide probes are synthesized *in situ* on the arrays. Eleven pairs of oligonucleotide probes are used to measure the level of transcription of each sequence represented on the GeneChip™ Rat Genome 230 2.0 Array.

Visit our website for a complete list of supporting documentation including procedures regarding target preparation, target hybridization, fluidics station setup, probe array scan, and data analysis.

## Instrumentation and software required

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

## Critical specifications

Item	Specification
Feature size	11 µm
Probe pairs/sequence	11
Array Format	64
Hybridization controls	<i>bioB, bioC, bioD, and cre</i>
Poly-A controls	<i>dap, lys, phe, and thr</i>
Housekeeping controls	GAPDH, β-Actin, hexokinase 1
Hybridization volume	200 µL The total fill volume of the cartridge is 250 µL.
Library files	Rat230_2

## 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.

### 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.

### Mask files

The GeneChip™ Rat Genome 230 2.0 Array includes a set of rat maintenance genes to facilitate the normalization and scaling of array experiments. This set of genes serves as a tool to normalize or scale your data prior to performing data comparisons. This set of normalization genes shows consistent levels of expression over defined sample sets. Mask files enabling the use of these probe sets for normalization and scaling are available on our website.

**Note:** We would like to acknowledge Gene Logic Inc. as the source of information that led to the determination of the algorithm used in the selection of the genes included in the Normalization Control Set.

### Comparison spreadsheets

Comparison spreadsheets are designed to assist in understanding the relationship between the data generated using different, but related, GeneChip™ expression probe arrays. Because the content of the GeneChip™ Rat Genome 230 2.0 Array is the same as the Rat Expression Set 230, the existing comparison spreadsheet can be used. Comparison spreadsheets are available 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™ Rat Genome 230 2.0 Array	2 arrays	900505
	6 arrays	900506
	30 arrays	900507
Supporting products		
GeneChip™ 3' IVT PLUS Reagent Kit	10 reactions	902415
	30 reactions	902416
GeneChip™ Hybridization, Wash, and Stain Kit <sup>[1]</sup>	30 reactions	900720

<sup>[1]</sup> Each kit contains 1 Hybridization Module, 1 Stain Module, 3 bottles of Wash Buffer A, and 1 bottle of Wash Buffer B, sufficient for 30 reactions. Individual kit components may be ordered separately.

## 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.

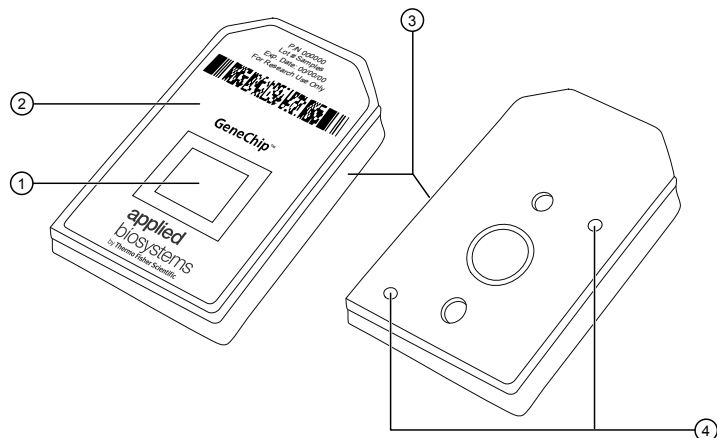


Fig. 1 Cartridge array.

- 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. MAN0017677

Revision	Date	Description
A.0	22 April 2018	Initial release in Thermo Fisher Scientific document control system. Supersedes legacy Affymetrix publication number 701564.

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