

Package Insert

GeneChip™ Rat Genome 230 2.0 Array

Intended Use

The 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.

GeneChip™ probe arrays are for research use only and not intended for use in diagnosis of disease. Visit our web site 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

1. GeneChip™ Scanner 3000 enabled for High-Resolution Scanning*
2. GeneChip™ Command Console™ Software (AGCC)
3. GeneChip™ Fluidics Station

*GeneChip Scanner 3000 High-Resolution Update is standard on all instruments shipped starting in September 2003 with serial number series 502. Previous versions, serial number series 501, will require the 00-0110 GeneChip Scanner 3000 High-Resolution Update to be installed.

Critical Specifications

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, beta-Actin, hexokinase 1
Hybridization Volume	200 µL. The total fill volume of the cartridge is 250 µL.
Library Files	Rat230_2

Accessory Files

Fluidics

The Fluidics Script used depends on the labeling protocol, hybridization and stain reagents used. Refer to the Fluidics Script Support page to determine the appropriate fluidics protocol for this array, GeneChip™ instrument system, and reagents used. The Fluidics Scripts can be downloaded from our web site.

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 type. Additional information can be located under the specific array product on our web site.

Mask Files

The Rat Genome 230 2.0 Array includes a set of rat maintenance genes to facilitate the normalization and scaling of array experiments¹. 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 web site.

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 web site.

Ordering Information

P/N	Product Name	Description
Arrays		
900505	GeneChip™ Rat Genome 230 2.0 Array	2 Arrays
900506	GeneChip™ Rat Genome 230 2.0 Array	6 Arrays
900507	GeneChip™ Rat Genome 230 2.0 Array	30 Arrays
Supporting Products		
901228	GeneChip™ 3' IVT Express Kit	Sufficient for 10 Reactions
901229		Sufficient for 30 Reactions
900720	GeneChip™ Hybridization, Wash, and Stain Kit ¹	Sufficient for 30 Reactions

1. Each kit contains one (1) Hybridization Module, one (1) Stain Module, three (3) bottles of Wash Buffer A and one (1) bottle of Wash Buffer B, sufficient for 30-reactions. Individual kit components may be ordered separately.

Precautions

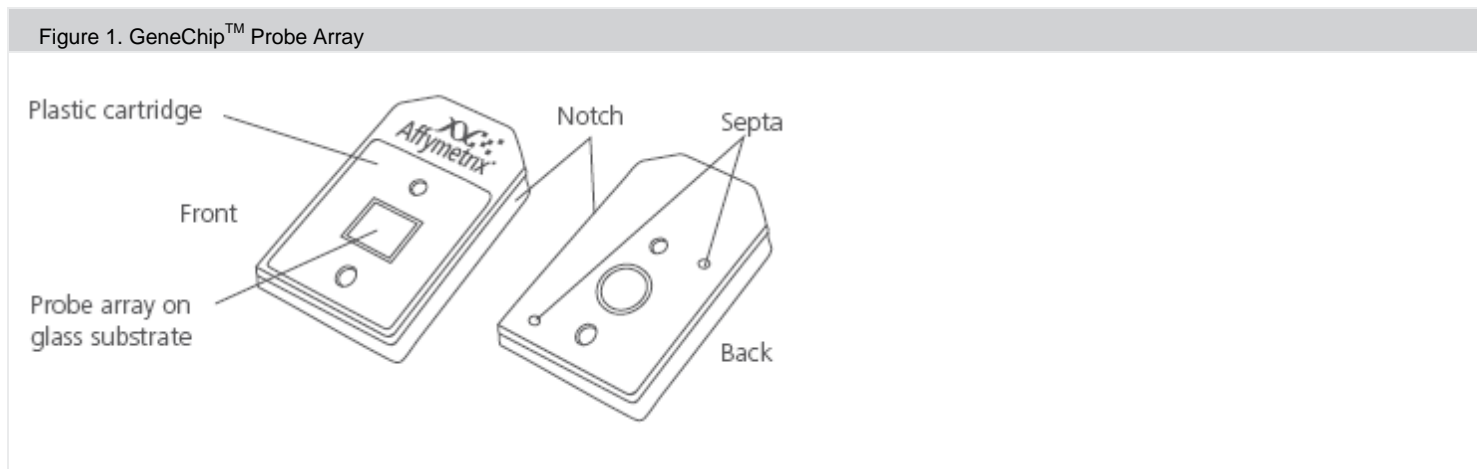
- GENECHIP™ PROBE ARRAYS ARE FOR RESEARCH USE ONLY; NOT FOR DIAGNOSTIC PROCEDURES.
- Avoid microbial contamination, which may cause erroneous results.
- **WARNING: All biological specimens and materials with which they come into contact should be handled as if capable of transmitting infection and disposed 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.**
- **CAUTION:** Exercise standard precautions when obtaining, handling, and disposing of potentially carcinogenic reagents.
- Exercise care to avoid cross-contamination of samples during all steps of this procedure, as this may lead to erroneous results.
- Use powder-free gloves whenever possible to minimize introduction of powder particles into sample or probe array cartridges.

¹We 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.

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.



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.

Documentation and support

Customer and technical support

Visit thermofisher.com/support for the latest in services and support, including:

- Worldwide contact telephone numbers
- Product support, including:
 - Product FAQs
 - Software, patches, and updates
- 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. If you have any questions, please contact Life Technologies at thermofisher.com/support.

The information in this guide is subject to change without notice.

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