

Human Genome U133 Plus PM Array Strip

Catalog Number 901569

Pub. No. 702838 Rev. 5

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.

Product use

The Applied Biosystems™ Human Genome U133 Plus PM Array Strip is designed for low- and medium-throughput microarray expression analysis and enables researchers to perform studies with minimum hands-on processing time per sample. Each array strip consists of 4 microarrays and is offered as a part of the automated solution including array strip hybridization, washing, staining, and scanning on the GeneAtlas™ System.

Each microarray on the Human Genome U133 Plus PM Array Strip contains the same number of probe sets as the industry-standard GeneChip™ Human Genome U133 Plus 2.0 Array cartridge array. This enables researchers to take a whole-genome approach to expression profiling and smoothly scale up to process large numbers of samples.

Two critical design changes are found on the Human Genome U133 Plus PM Array Strip:

1. Only Perfect Match (PM) probes from the cartridge design were retained while Mismatch (MM) probes were removed.
2. Empirical data were used to select the best-performing probes resulting in reducing the number of PM probes; 42,461 probe sets were reduced from 11 to 9 probes and another 6 probe sets were reduced from 11 to 10; 12,208 probe sets remained unchanged.

Sequences used in the design of the arrays were selected from GenBank™, dbEST, and RefSeq. The majority of sequence clusters were created from the UniGene database (Build 133, April 20, 2001) and refined by analysis and comparison with a number of other publicly available databases, including the Washington University EST trace repository and the University of California, Santa Cruz Golden-Path human genome database (April 2001 release). An additional set of sequence clusters were created from Build 159 of UniGene (January 25, 2003) and refined by analysis and comparison with a number of other publicly available databases, including the Washington University EST trace repository and the NCBI human genome assembly (Build 31). Sequences were further analyzed for correct orientation, false priming, false clustering, alternative splicing, and alternative polyadenylation.

Identical to the cartridge array manufacturing process, the oligonucleotide probes on the Human Genome U133 Plus PM Array Strip are synthesized *in situ* using the photolithographic process.

Visit our website for a complete list of supporting documentation for procedures regarding target preparation, target hybridization, washing, staining, and scanning.

Reagents, instrumentation, and software required

1. GeneChip™ 3' IVT PLUS Reagent Kit
2. GeneAtlas™ Hybridization, Wash, and Stain Kit for 3' IVT Array Strips
3. GeneAtlas™ System

Critical specifications

Item	Specification
Feature size	8 µm
Probes/sequence	9 to 11 Perfect Match Probes
Hybridization controls	<i>bioB</i> , <i>bioC</i> , <i>bioD</i> , and <i>cre</i>
Poly-A controls	<i>dap</i> , <i>lys</i> , <i>phe</i> , and <i>thr</i>
Normalization controls	100 probe sets
Housekeeping/control genes	GAPDH, β-Actin
Hybridization volume	120 µL

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. MLS: Fisher Scientific (fisherscientific.com) or other major laboratory supplier.

Product name	Description	Cat. No.
HG-U133 Plus PM Array Strip Kit ^[1]	1 Array Strip Kit	901569
GeneChip™ 3' IVT PLUS Reagent Kit	10 rxns Sufficient for 20 rxns on the GeneAtlas™ System	901228
GeneAtlas™ Hybridization, Wash, and Stain Kit for 3' IVT Array Strips	60 rxns	901531

^[1] Each array strip kit contains: 1 array strip (4 arrays), 3 hybridization trays, 1 imaging tray, 1 Wash A tray, and 1 Wash B tray for the GeneAtlas™ System.

Storage, handling, and stability

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

When handling the array strip

Always remove the array strip from the pouch with gloved hands using caution not to damage or scratch the array surface.

Array strip consumables

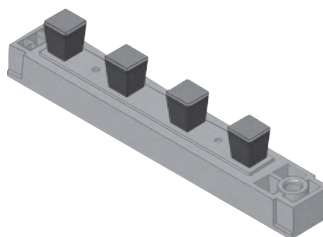


Fig. 1 Array strip (clear plastic).

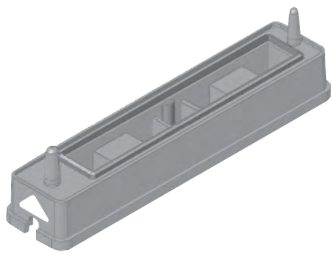


Fig. 2 GeneAtlas™ hybridization tray (clear plastic).

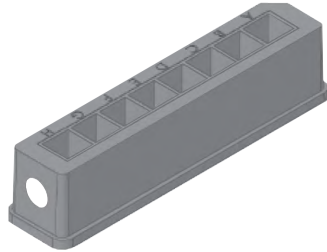


Fig. 3 GeneAtlas™ wash B tray (clear plastic).

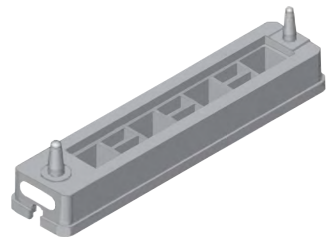


Fig. 4 GeneAtlas™ imaging tray (black plastic).

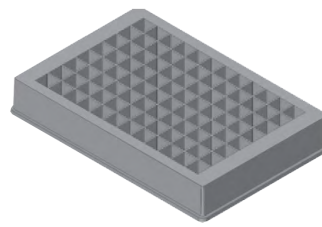


Fig. 5 GeneAtlas™ wash A and stain tray (clear plastic).

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
 - 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. If you have any questions, please contact Life Technologies at www.thermofisher.com/support.



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Revision history: Pub. No. 702838

Revision	Date	Description
5	17 November 2017	Update document to current template.
4	28 June 2012	Baseline for revision history.

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