



GeneChip® HT Human Genome U133 Array Plate Set

Intended Use

The GeneChip® HT Human Genome U133 Array Plate Set is designed for high-throughput microarray expression analysis, greatly simplifying the management of multiple microarrays run in parallel. Each array plate consists of 24 or 96 arrays in a peg format. The pegs are constructed to be spatially compatible with conventional 96-well plate formats and liquid-handling equipment.

The GeneChip HT Human Genome U133 Array Plate Set is a two-plate set that includes both the GeneChip® HT Human Genome U133A Array Plate and the GeneChip® HT Human Genome U133B Array Plate.

The content found on single arrays from each HT Array Plate in the HT Plate Set is identical to that found on the corresponding cartridge arrays in the GeneChip® Human Genome U133 Set, respectively. Due to differences in array hybridization, processing, and scanning, data from the HT Array Plates are not expected to be directly comparable to the corresponding cartridge-based designs.

Sequences used in the design of the arrays were selected from GenBank®, dbEST, and RefSeq. Sequence clusters were created from Build 133 of UniGene (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). 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 GeneChip® brand HT Array Plates are synthesized *in situ* using Affymetrix' photolithographic process. Eleven pairs of 25-mer oligonucleotide probes are used to measure the level of transcription of each gene sequence interrogated.

GeneChip probe arrays and plates are for research use only and not intended for use in diagnosis of disease. Please refer to www.affymetrix.com for a list of supporting manuals for procedures regarding target preparation, target hybridization, washing, staining, and array plate scanning.

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 the Affymetrix web site at www.affymetrix.com/support/technical/libraryfilesmain.affx.

Mask Files

Both the GeneChip® HT Human Genome U133A and the GeneChip® HT Human Genome U133B Array Plates include a set of constitutively expressed human 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 comparison. This set of normalization genes shows consistent levels of expression over a diverse set of tissues. Mask files enabling the use of these probe sets for normalization and scaling are available on the Affymetrix web site at the following URL: www.affymetrix.com/support/technical/mask_files.affx

Critical Specifications

Feature Size	8 µm
Probes/Sequence	11
Hybridization Controls	<i>bioB, bioC, bioD, cre</i>
Poly-A Controls	<i>dap, lys, phe, thr</i>
Normalization Controls	100 probe sets
Housekeeping/Control Genes	GAPDH, beta-Actin, ISGF-3 (STAT1)
Hybridization Volume	80 µL
Library Files	HT_HG-U133A, HT_HG-U133B

Ordering Information

901078	GeneChip® HT Human Genome U133 24-Array Plate Set	
	■ GeneChip® HT Human Genome U133A 24-Array Plate	■ 4
	■ GeneChip® HT Human Genome U133B 24-Array Plate	■ 4
	■ GeneChip® HT Hybridization Tray	■ 8
	■ GeneChip® HT Wash Tray	■ 40
	■ GeneChip® HT Stain Tray ¹	■ 32
	■ GeneChip® HT Scan Tray	■ 8
901077	GeneChip® HT Human Genome U133 96-Array Plate Set	
	■ GeneChip® HT Human Genome U133A 96-Array Plate	■ 1
	■ GeneChip® HT Human Genome U133B 96-Array Plate	■ 1
	■ GeneChip® HT Hybridization Tray	■ 2
	■ GeneChip® HT Wash Tray	■ 10
	■ GeneChip® HT Stain Tray ¹	■ 8
	■ GeneChip® HT Scan Tray	■ 2
900750	GeneChip® HT Human Genome U133A 24-Array Plate	
	■ GeneChip® HT Human Genome U133A 24-Array Plate	■ 4
	■ GeneChip® HT Hybridization Tray	■ 4
	■ GeneChip® HT Wash Tray	■ 20
	■ GeneChip® HT Stain Tray ¹	■ 16
	■ GeneChip® HT Scan Tray	■ 4
900751	GeneChip® HT Human Genome U133A 96-Array Plate	
	■ GeneChip® HT Human Genome U133A 96-Array Plate	■ 1
	■ GeneChip® HT Hybridization Tray	■ 1
	■ GeneChip® HT Wash Tray	■ 5
	■ GeneChip® HT Stain Tray ¹	■ 4
	■ GeneChip® HT Scan Tray	■ 1
901042	GeneChip® HT Human Genome U133B 24-Array Plate	
	■ GeneChip® HT Human Genome U133B 24-Array Plate	■ 4
	■ GeneChip® HT Hybridization Tray	■ 4
	■ GeneChip® HT Wash Tray	■ 20
	■ GeneChip® HT Stain Tray ¹	■ 16
	■ GeneChip® HT Scan Tray	■ 4
901043	GeneChip® HT Human Genome U133B 96-Array Plate	
	■ GeneChip® HT Human Genome U133B 96-Array Plate	■ 1
	■ GeneChip® HT Hybridization Tray	■ 1
	■ GeneChip® HT Wash Tray	■ 5
	■ GeneChip® HT Stain Tray ¹	■ 4
	■ GeneChip® HT Scan Tray	■ 1
901253	GeneChip® HT 3' IVT Express Kit	96 Rxn
901225	GeneChip® HT 3' IVT Express Kit	4 x 24 Rxn
901228	GeneChip® 3' IVT Express Kit	10 Rxn
901229	GeneChip® 3' IVT Express Kit	30 Rxn
901530	GeneTitan® Hybridization, Wash, and Stain Kit for 3' IVT Arrays	96 Rxn
901561	Affymetrix® Labware Kit for IVT Express Method on Beckman® Biomek FX® Target Prep Instrument ²	See Footnote ²

1. Stain tray is also used as a prehybridization tray.
2. The labware kit contains consumables sufficient for 4x24 or 4x96 rxn runs.

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

Reagents, Instrumentation and Software Required

1. GeneChip® HT 3' IVT Express Kit
2. GeneChip® HT Hybridization, Wash, and Stain Kit
3. GeneTitan® System
4. Affymetrix GeneChip® Command Console® Software

For a complete list of reagents and consumables required, please refer to www.affymetrix.com for a list of supporting manuals for HT Array Plates.

Precautions

1. GENECHIP ARRAY PLATES ARE FOR RESEARCH USE ONLY. NOT FOR USE IN 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 plates.
7. CAUTION: Use care when handling the Scan Tray as it has protruding guiding posts that may be sharp and can stick out of the pouch if not handled carefully.

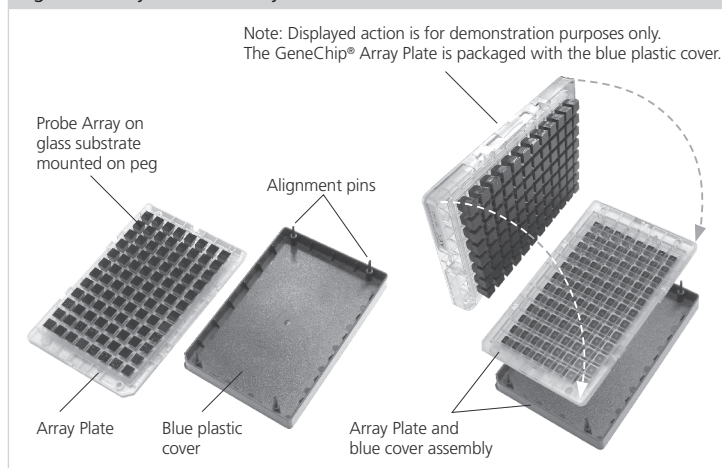
Storage, Handling and Stability

The GeneChip array plates should be stored at 2° to 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 Plate

Remove the array plate from the pouch with gloved hands. The array plate is packaged with a blue plastic cover (Figure 1). Do not remove the protective blue plastic cover from the array plate or touch the array plate directly. This protective cover should stay with the array plate at all times prior to being handled by the GeneTitan System.

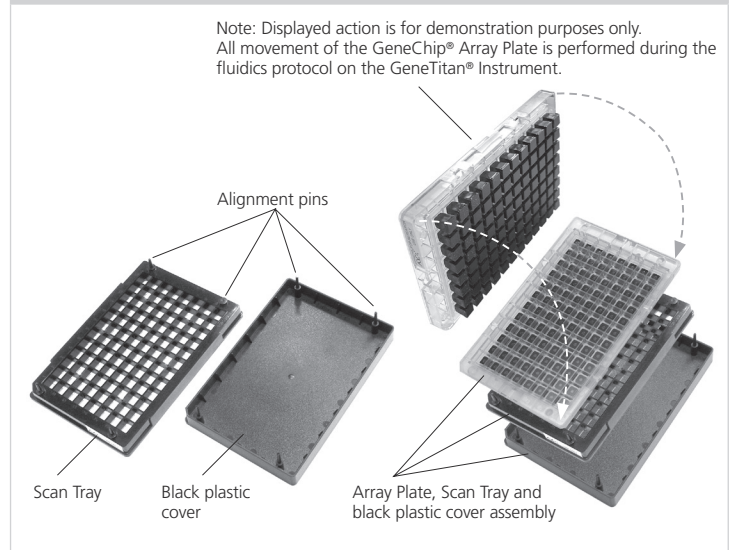
Figure 1. Array Plate Assembly



When Handling the HT Scan Tray

Remove the scan tray from the pouch with gloved hands. The scan tray is packaged with a black plastic cover (Figure 2). Do not remove the protective black plastic cover from the scan tray or touch the scan tray directly. This protective cover should stay with the scan tray at all times prior to loading into the GeneTitan System. In addition, the scan tray has protruding guiding posts that may be sharp and can stick out of the pouch if not handled carefully; therefore, take precaution to prevent unnecessary injury.

Figure 2. Scan Tray Assembly



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