



## GeneChip® Cotton Genome Array

### Intended Use

The GeneChip® Cotton Genome Array is a single GeneChip brand array comprised of 23,977 probe sets representing 21,854 cotton transcripts. Sequences used in the design of the array were selected from GenBank®, dbEST, and RefSeq, and were created from the *Gossypium hirsutum* UniGene database (Build 2, August 2006) and the *Gossypium raimondii* UniGene database (Build 2, September 2005). These sequences derive from the many contributors from the Cotton Community. Some select sequences were generously made publicly available prior to publication by a group within the Cotton Community specifically to enhance the design of the GeneChip Cotton Genome Array.

The GeneChip Cotton Genome Array is based on EST sequences obtained from four species of Cotton: *Gossypium hirsutum*, *Gossypium raimondii*, *Gossypium arboreum*, and *Gossypium barbadense*. The Array was designed in close collaboration with the Cotton Research Community as part of the Affymetrix® GeneChip Consortia Program.

GeneChip probe arrays are for research use only and not intended for use in diagnosis of disease. Please visit [www.affymetrix.com](http://www.affymetrix.com) 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	100
Hybridization Controls	<i>bioB</i> , <i>bioC</i> , <i>bioD</i> , <i>cre</i>
Poly-A Controls	<i>dap</i> , <i>lys</i> , <i>phe</i> , <i>thr</i> , <i>trp</i>
Housekeeping/Control Genes	sucrose synthase, actin, and polyubiquitin for <i>Gossypium hirsutum</i> and <i>Gossypium raimondii</i>
Hybridization Volume	130 µL. The total fill volume of the cartridge is 160 µL.
Fluidics Protocol	Fs450/250 with GeneChip® HWS Kit: <b>FS450_0002</b> Fs450/250 with User-Prepared solutions: <b>Midi_euk2v3_450</b> Fs 400: <b>Midi_euk2v3</b>
Library Files	Cotton

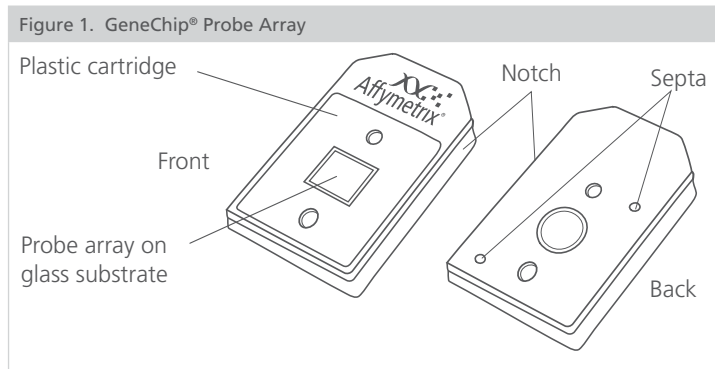
### Precautions

1. GENECHIP PROBE ARRAYS ARE FOR RESEARCH USE ONLY; NOT FOR 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 cartridges.

### 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.

### Ordering Information

P/N	Product Name	Description
<b>Arrays</b>		
901000	GeneChip® Cotton Genome Array	2 Arrays
901001	GeneChip® Cotton Genome Array	6 Arrays
901002	GeneChip® Cotton Genome Array	30 Arrays
<b>Supporting Products</b>		
901228	GeneChip® 3' IVT Express Kit	Sufficient for 10 Reactions
901229		Sufficient for 30 Reactions
900720	GeneChip® Hybridization, Wash, and Stain Kit <sup>1</sup>	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.

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## Contact Information

### Affymetrix, Inc.

3420 Central Expressway  
Santa Clara, CA 95051 USA  
E-mail: [support@affymetrix.com](mailto:support@affymetrix.com)  
Tel: 1-888-362-2447 (1-888-DNA-CHIP)  
Fax: 1-408-731-5441

### Affymetrix UK Ltd

Voyager, Mercury Park,  
Wycombe Lane, Wooburn Green,  
High Wycombe HP10 0HH  
United Kingdom  
E-mail: [supporteurope@affymetrix.com](mailto:supporteurope@affymetrix.com)  
UK and Others Tel: +44 (0) 1628 552550  
France Tel: 0800919505  
Germany Tel: 01803001334  
Fax: +44 (0) 1628 552585

### Affymetrix Japan, K. K.

Mita NN Bldg, 16 Floor  
4-1-23 Shiba, Minato-ku  
Tokyo 108-0014, Japan  
E-mail: [supportjapan@affymetrix.com](mailto:supportjapan@affymetrix.com)  
Tel: +81-(0)3-5730-8200  
Fax: +81-(0)3-5730-8201

Please visit our web site for international distributor contact information  
[www.affymetrix.com](http://www.affymetrix.com)


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