



Data Sheet

GeneChip® *Vitis vinifera* Genome Array

The GeneChip® *Vitis vinifera* (Grape) Genome Array provides comprehensive coverage of the *V. vinifera* genome to meet your specific research requirements. The GeneChip *V. vinifera* Genome Array is the first whole-genome array of its kind and contains over 16,000 probe sets to monitor grape expression profiles.

The *V. vinifera* Array was made possible through the GeneChip® Consortia Array Program, and the design of the array was a collaborative effort between key researchers in the *V. vinifera* research community and Affymetrix.

Power of the Probe Set—The key advantage of GeneChip technology is that each high-density array contains multiple probe pairs per probe set, providing several independent measurements from every transcript.

Applications

V. vinifera is the principal grape used as a model organism for the wine and raisin industries, and the GeneChip® *Vitis vinifera* Genome Array is an ideal tool for researchers studying gene expression profiles in grapes. With the most comprehensive representation of publicly available information, *V. vinifera* researchers will be able to use this array to monitor a variety of genetic mechanisms.

Research applications for the GeneChip *Vitis vinifera* Genome Array include studying abiotic and biotic stresses to better understand issues, such as drought and temperature effects, and genes involved with crop improvement traits for this economically important crop.

Array Profile

The GeneChip *Vitis vinifera* Genome Array is a 100-format, 11-micron array design, and it contains 16 probe pairs per probe set. The

array can interrogate 14,000 *V. vinifera* transcripts and 1,700 transcripts from other *Vitis* species, offering *V. vinifera* researchers the most comprehensive array available for gene expression research. Sequences used in the design of the *Vitis vinifera* Array were selected from GenBank®, dbEST, and RefSeq. The sequence clusters were created from the UniGene database (Build 7, Oct 2003).

Instrument Software Requirements

- GeneChip® Scanner 3000, enabled for High-Resolution Scanning*
- GeneChip® Operating Software (GCOS) v1.1.1, which contains the High-Resolution Scanning Update

* 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

Number of arrays in set	One
Number of probe sets	16,000
Feature size	11 µm
Oligonucleotide probe length	25-mer
Probe pairs/sequence	16
Array format	100
Control sequences included:	
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> , <i>thr</i> , and <i>trp</i>
Housekeeping/Control genes:	GAPDH, beta actin, Elongation factor 1-alpha
Detection sensitivity	1:100,000*

*As measured by detection in comparative analysis between a complex target containing spiked control transcriptions and a complex target with no spikes.

Supporting Products

Part Number	Product Name	Description
900493	GeneChip® One-Cycle Target Labeling and Control Reagents ¹	Sufficient for 30 reactions. Contains: <ul style="list-style-type: none">• IVT Labeling Kit• One-Cycle cDNA Synthesis Kit• Sample Cleanup Module• Poly-A RNA Control Kit• Hybridization Controls
900494	GeneChip® Two-Cycle Target Labeling and Control Reagents ^{1,2}	Sufficient for 30 reactions. Contains: <ul style="list-style-type: none">• IVT Labeling Kit• Two-Cycle cDNA Synthesis Kit• Sample Cleanup Module• Poly-A RNA Control Kit• Hybridization Controls

¹Individual Kit components may be ordered separately.

²For the intermediate IVT step with unlabeled nucleotides, please order the MEGAscript® T7 Kit directly from Ambion.

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Ordering Information

GeneChip® *V. vinifera* Genome Array

GeneChip® *V. vinifera* Genome Array

900509 *Contains 2 arrays*

900510 *Contains 6 arrays*



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