

# Agilent Magnaporthe Grisea Oligo Microarray 2.0 (G4137B)

with SurePrint Technology

## Catalog 60-mer Oligo



### Specifications

Number of microarrays in kit	5
Number of genes and transcripts	21,495
Feature size	~135 $\mu$ m
Microarray format	22K
Oligo probe length	60-mer
Probe orientation	Sense
Average reproducibility	Std. Dev < 0.02
Detection sensitivity	1 transcript/cell/million cells*
Dynamic range	0.01-10pM
RNA sample requirement/labeling reaction	20 $\mu$ g total RNA for cDNA labeling 50 - 300 ng total RNA for amplified cRNA labeling
Type of labeling	Cyanine 3 & cyanine 5 fluorescent labeling
Overall assay time	18.5 hours

### Features at a glance

- Genome-wide coverage of *Magnaporthe grisea* plus inclusion of relevant rice genes in a single microarray
- Complete access to probe sequence information used to query the IRBGC Magnaporthe and University of Arizona rice databases
- Unparalleled sensitivity in a microarray for detecting genes with low expression levels—delivered by Agilent's unique 60-mer oligonucleotide probe format
- Consistent feature (spot) quality from microarray-to-microarray yielding results you can trust
- Convenient two-color labeling procedure reduces experimental variability by allowing biological samples to be directly compared with each other on the same microarray—after undergoing the same hybridization incubation
- Accessible format—microarrays on barcoded, 1" x 3" (25mm x 75mm) glass slides

### Coverage you can count on

*Magnaporthe grisea* is the cause of rice blast, the most devastating disease of rice worldwide. This fungal pathogen is highly tractable and serves as a seminal model for the study of plant disease. The genome-wide content on this microarray contains oligos designed after 15,170 predicted Magnaporthe genes from the newly annotated data set at the Fungal Genomics Laboratory at North Carolina State University. Included are annotations from the Whitehead Institute at the Massachusetts Institute of Technology (*M. grisea* Version 4.0, October 2003). This microarray also contains 6,325 rice probes designed after ESTs of rice genes. Rice ESTs were derived from cDNA generated at the Ohio State University from uninfected as well as *M. grisea* infected rice tissue, and sequenced at the University of Arizona's Plant Genomics Institute. This microarray is the first of its kind in that it allows analysis of gene expression profiles in both the host and pathogen simultaneously. Research conducted using this "interactions" chip will facilitate enhanced management of fungal pathogens and the improvement of disease resistance rice.

### Content and convenience you need in a microarray

Agilent's *Magnaporthe grisea* Oligo Microarray (2.0) Kit contains five microarrays on five 1 x 3 inch (25mm x 75mm) glass slides. Each 22,575-feature microarray contains 20,803 (60-mer) probes representing all predicted Magnaporthe genes and select rice EST sequences. The International Rice Blast Genome Consortium in collaboration with the Whitehead Institute, funded by a joint grant from the National Science Foundation and the United State Department of Agriculture, have sequenced and annotated the genome of *M. grisea* in response to that need. Agilent has used those data for the design of the 60-mer probes on this *Magnaporthe grisea* oligo microarray. Annotation for this microarray is presented at the University of Arizona/Plant Genomics Institute website at <http://www.mgosdb.org>.

### We print microarrays so you don't have to

Because probe design is so integral to providing trusted content, Agilent uses powerful probe design algorithms to select unique probes that maximize probe sensitivity while minimizing the potential for cross-hybridization. Agilent's SurePrint fabrication platform features a flexible, industrial-scale inkjet printing process that synthesizes oligonucleotide probes *in situ* on glass wafers that are later scribed into barcoded 1" x 3" (25mm x 75mm) glass slides. This process allows Agilent to iterate its microarray design files quickly to keep pace with ever-changing genome discoveries. For researchers, this means they can get easy access to high-quality microarrays with the best content today for tomorrow's discoveries.

Agilent's flexible printing processes also leave the door open to researchers who want to add their own personal touch to microarrays. Approximately 500 features have been left open on this microarray for adding user-defined probes. Ask your sales representative about this flexible option available through Agilent's custom microarray program.

\*Based on studies using Agilent Yeast Oligo Microarrays and published as a technical note available on the Agilent website. Go to the library tab and type in 5988-5977EN.



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# Agilent Magnaporthe Grisea Oligo Microarray 2.0

## Quick to implement

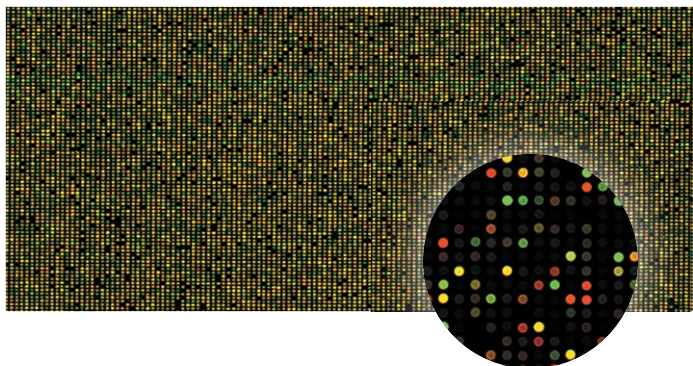
- Confidently scan on Agilent's DNA Microarray Scanner for maximum performance and reproducibility or most other commercial 1 x 3 inch (25mm x 75mm) glass slide scanners
- Analyze features seamlessly and quickly with Agilent's Feature Extraction Software, or leverage existing feature analysis programs already in place (Agilent provides GAL, XML and tab-delimited text file formats on a CD-ROM in each kit)
- Access probe sequence and annotation information easily through Agilent's website

## Enhanced performance

- Agilent provides a complete line of labeling and hybridization reagents as well as hybridization chambers and accessories that when used together enhance the ease-of-use and performance of Agilent's microarrays

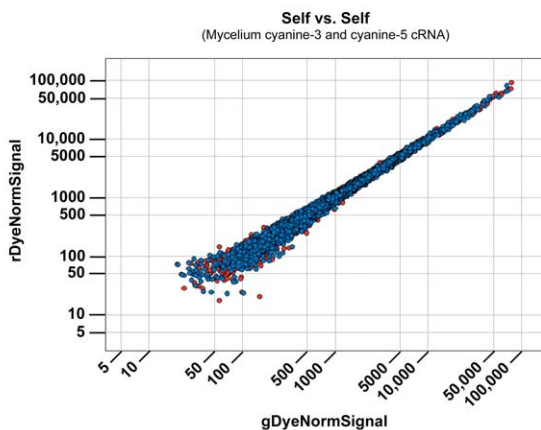
## Comprehensive coverage

Scanned and feature extracted using Agilent's DNA Microarray Scanner System, the following image depicts a hybridized *M.grisea* oligo microarray containing 21,495 (60-mer) probes representing over 15,000 well-characterized *M.grisea* genes and over 6,000 rice genes from *M. grisea*-infected rice tissue.



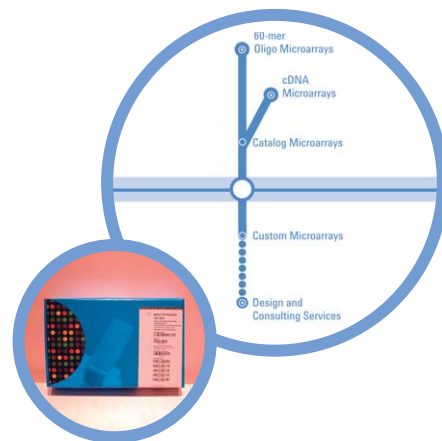
## Quality Data

Low noise leads to more consistent data and enhanced sensitivity as demonstrated by the results of a self vs. self hybridization on replicate microarrays.



## Discover more on the web

Agilent's website offers additional performance data, ordering and configuration information, technical publications and more. Visit our website for more details about this microarray as well as Agilent's complete gene expression solution.



## Kit contents

- 5 microarrays on five 1 x 3 inch glass slides
- CD-ROM containing feature information
- Oligo Microarray Kit Hybridization Protocol

## Ordering information

Magnaporthe Grisea Oligo Microarray 2.0	G4137B
Fluorescent Direct Label Kit	G2557A
Low RNA Input Fluorescent Linear Amplification Kit	5184-3523
In situ Hybridization Kit Plus	5184-3568
Hybridization Chamber (22K)	G2534A
Hybridization Septa, Backings & Gasket	G2534-60003

## [www.agilent.com/chem/dna](http://www.agilent.com/chem/dna)

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