



Affordable

Quality, Performance, Results

Human Whole Genome OneArray™ DNA Microarray

- As low as \$69 per array¹
- 100% Satisfaction Guaranteed²
- Competes head-to-head with leading platforms
- Easy, affordable Service Packages starting at \$350 per sample—including the cost of the microarrays!
- *OneArray Express Program*—easier, faster, cheaper!

Table 1: Human OneArray™ Pricing

Number of Arrays	Product ID Number	Price
10	HOA_0010	\$790 (\$79 each)
50	HOA_0050	\$3,700 (\$74 each)
100	HOA_0100	\$6,900 (\$69 each)

Genome Content

Each microarray contains 32,050 oligonucleotides: 30,968 human genome probes + 1,082 experimental control probes.

Each 60-mer oligo probe is designed to hybridize to a specific target gene described in the current public domain content validated by the Human Genome Sequencing Project (HGSP).

Table 2 (right) provides a summary of the probe content of Human OneArray. The probe set annotation is updated approximately every two months with each UniGene build.

The most up-to-date annotation, *.gal files, and probe sequences can be obtained at www.OneArray.com.

Table 2: Human OneArray™ Probe Content

Probe Type	Number of Probes
UniGene and RefSeq based	30,968 (total) ³
UniGene build #175 based and/or RefSeq based with Entrez Gene ID including: CGAP (Cancer Genome Anatomy Project, BioCards and KEGG (Kyoto Encyclopedia of Genes and Genomes) pathways	28,703
UniGene build #163 based with Gene ID and experimentally selected	2265

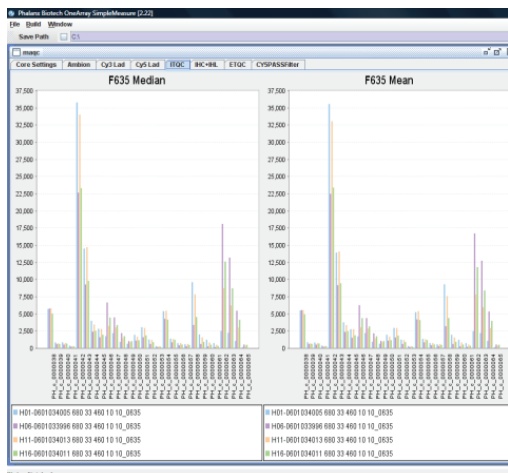
Control Features

There are 1,082 control probes built into Human OneArray that monitor the sample quality and hybridization process.

These control probes provide valuable information to ensure experiments are done correctly, resulting in higher quality results for analysis. For more detailed control probe information, visit www.OneArray.com.

Figure A (right), shows how more than 1000 experimental control features can quickly and easily be analyzed with our free SimpleMeasure software package.

Figure A. (right) Data Analysis of One Array using SimpleMeasure software package (free & downloadable)



¹: Local distributor price may vary.
²: Please contact us for details.

³: Human OneArray is guaranteed to print 98% or more of the total probe content.

How Does OneArray Compare to Other Microarray Platforms?

Data Quality

OneArray has been tested under the same experimental conditions as those used in the original Microarray Quality Control (MAQC) project.⁴ The FDA-led project was initiated, in part, to provide a standard by which all microarray platforms could be compared. Four standard RNAs were tested on each platform and lists of differentially expressed genes were generated according to the manufacturer's protocols. The data show OneArray yields high quality data that is comparable to the platforms included in the original study.

Repeatability of OneArray is Comparable to Affymetrix, Illumina & Agilent

The MAQC project evaluated repeatability and reproducibility of several platforms by measuring the coefficient of variation (CV) of the signal magnitude values for intra-site replicates. The whisker plots in the graph below indicate that Human OneArray shows CV values <8%, showing excellent array-to-array consistency, and is comparable to leading platforms.

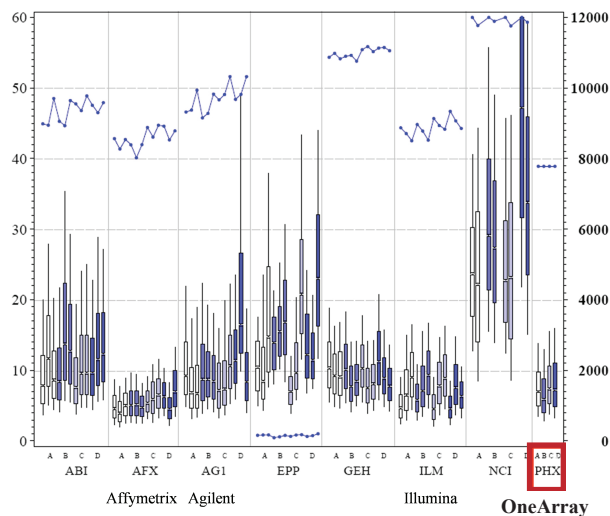


Figure B. Repeatability of Microarray Platforms

ABI=Applied Biosystems, AFX=Affymetrix, AGI=Agilent, EPP=Eppendorf, GEH=GE Healthcare, ILM=Illumina, NCI=National Cancer Institute, PHX=Phalanx Biotech Human OneArray.⁶

OneArray Detects Similar Gene Expression as Affymetrix, Illumina & Agilent

One of the goals of the MAQC study was to evaluate inter-platform data concordance. This can be assessed by determining whether differences between two samples can be detected on each microarray platform. Figure 4, below, shows the intraplatform data concordance of differentially expressed genes using two standard RNAs as the samples.⁵

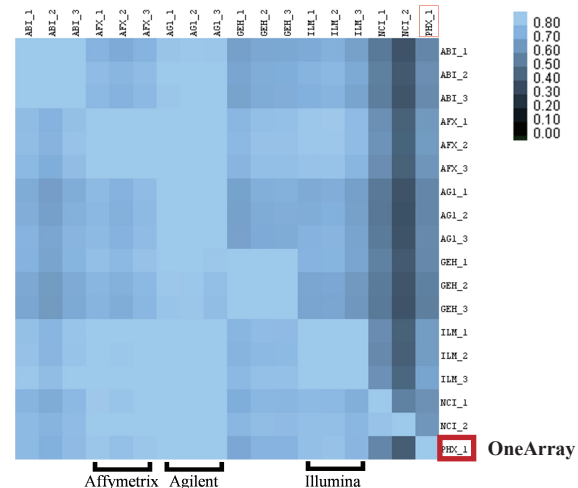


Figure C. Comparison of Gene List Overlap

The light blue boxes on the PHX horizontal (red box) show that Human OneArray is detecting a set of genes similar to those detected by Affymetrix, Illumina and Agilent.⁶

OneArray Gene Coverage Matches Other Long-Oligo Arrays

In an effort to investigate how to generate a more complete probe set, a probe annotation pipeline was developed using the whole genome as a reference set. The annotation pipeline was used to evaluate long oligonucleotide probe sets from several different sources. Probes were assigned to six different categories based on their alignment to the whole genome. Analysis of available human gene expression microarrays indicates increased probe density does not correlate with increased gene coverage or interrogation power, and that Human OneArray provides coverage comparable to other commercially available arrays.

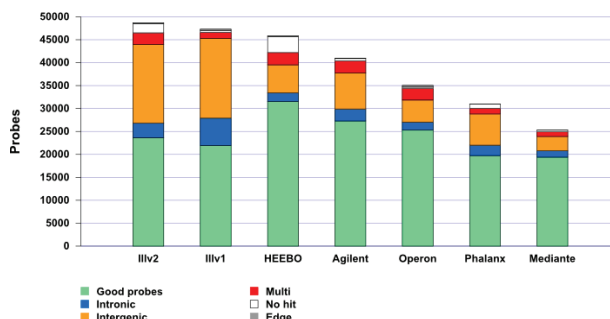


Figure D. Probe Set Breakdown

4: MAQC Consortium (2006) Nat Biotech 24(9): 1151-1161. For more information on the MAQC Project, please visit <http://www.fda.gov/nctr/science/centers/toxicoinformatics/maqc/> For complete performance of OneArray, please visit <http://onearray.com/Power/Power.html>

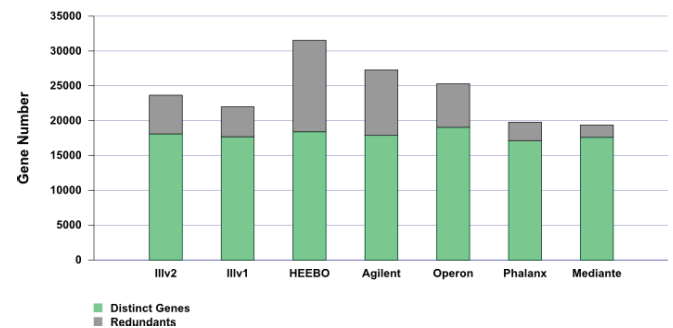


Figure E. Interrogation Power

5: The two RNAs used for this comparison were Sample A, Stratagene Universal Human Reference RNA, and Sample B, Ambion Human Brain Reference RNA.

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