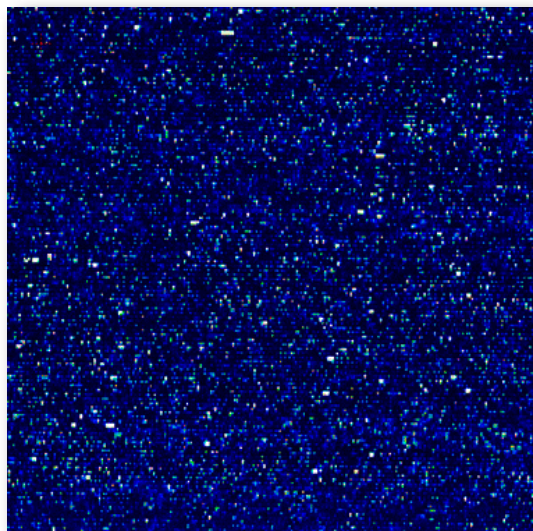


# Expression Profiling Services



The Affymetrix GeneChip® System is recognized worldwide as the gold standard for expression profiling. Used by leading researchers in academics, biotech and the pharmaceutical industry, the most recent generation of the GeneChip array allows the simultaneous measurement of over 47,000 transcripts, including 38,500 genes in a single microgram sample of total RNA. Typical applications of this technology include:

- Identification of genes uniquely expressed in samples of normal or diseased tissue
- Investigation of changes in gene expression associated with:
  - drug treatment
  - environmental effects
  - developmental progression
  - disease states
  - mutations
- Determination of the putative functions for uncharacterized ESTs
- Identification of genetic expression 'fingerprints' of efficacy and toxicity



Let **Precision Biomarker Resources** be your partner in genomic discovery. As an Affymetrix Authorized Service Provider, our team of scientists is well versed in the use of microarrays for expression profiling. We provide a full-service program starting with your tissue or RNA samples that provides you with powerful, high-content data that will advance your research without the need to invest in new resources.

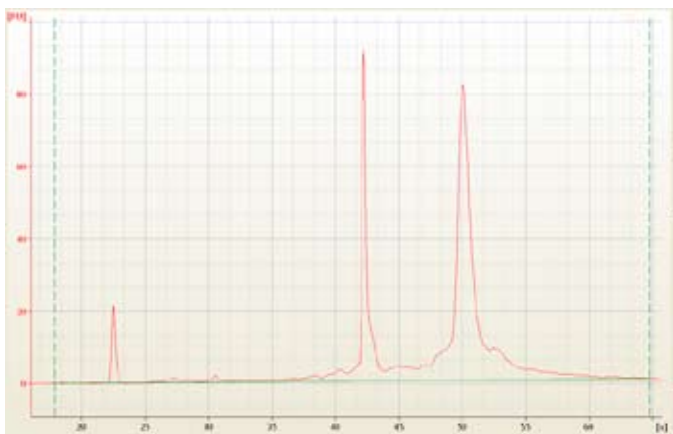
## COMPLIMENTARY EXPERIMENTAL DESIGN CONSULTATIONS

The single most important factor influencing the project is the experimental design. A properly designed experiment increases your chance of success by providing the maximum amount of reliable information in the most cost-effective manner. By contrast,

a poorly designed experiment can cost you time and money in unreliable results, difficult data analysis and repeated experiments. The type and number of samples (replicates) in an experiment are particularly important. Too many and you are wasting your money, too few and you risk statistical irrelevance. Let our staff of microarray experts share their experience and expertise with you to optimize your experimental design for maximum results.

Starting Material Guidelines			
Assay Type	Amount of Total RNA	OD260:280	Concentration in $\mu\text{g}/\mu\text{l}$
One-Cycle	2-5 $\mu\text{g}$	1.8 – 2.0	0.5 – 1.0
Whole Transcript (Exon or Gene Array)	2-5 $\mu\text{g}$	1.8 – 2.0	0.5 – 1.0
Two-Cycle	> 10 ng	1.8 – 2.0	

## QUALITY CONTROL IS KEY



Sample quality is key to obtaining good results – “Garbage In, Garbage Out”. Precision Biomarker Resources takes extra care with your samples to monitor sample and process quality throughout the procedure. With more than 14 quality metrics applied at up to 7 checkpoints throughout, we take care of your samples as if they were our own.

Initial Quality Control is performed on all samples the moment they come through the door, as we verify the integrity of the shipment. After this, the RNA you provide (or we extract from your samples) is qualitatively and quantitatively characterized using the Agilent 2100 Bioanalyzer and spectrophotometric analysis. In the event we detect a suboptimal sample, we will halt the process and contact you immediately to determine whether or not the material should still be processed.

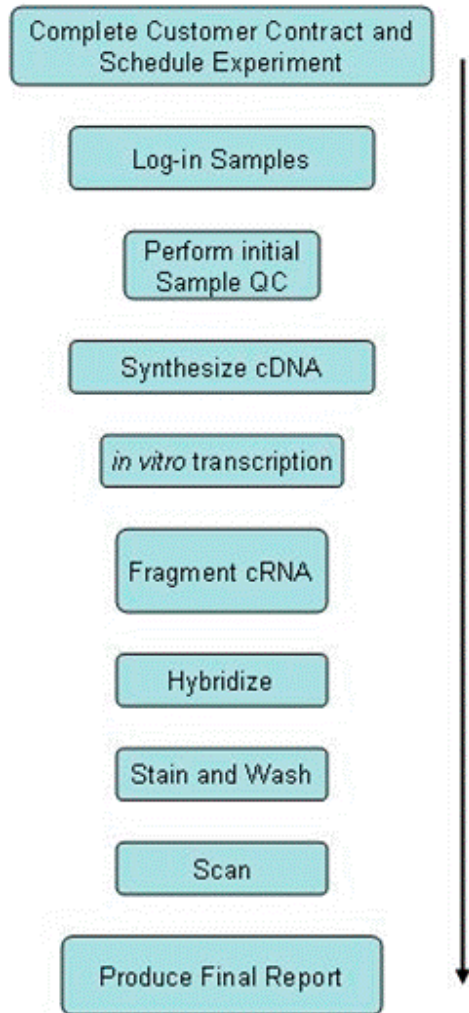
We continue to monitor the process at every critical phase of the procedure to build-in quality as we perform your analysis. At Precision Biomarker Resources, we understand you do not have the time or the money for experimental results you cannot trust and we work to ensure the very highest standards are met.



## SAMPLE PROCESSING

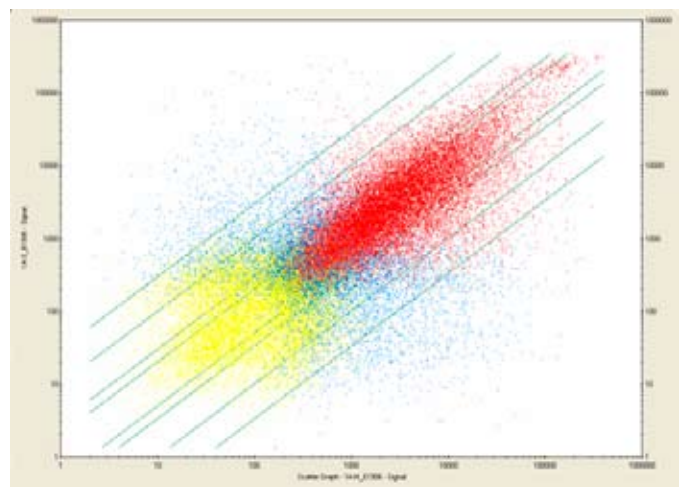
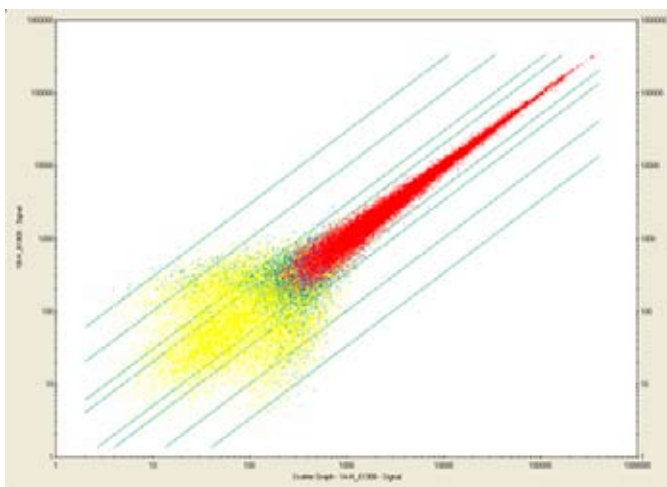
Precision Biomarker Resources uses established protocols for the amplification and labeling of sample RNA for expression profiling. We use a variety of protocols depending on the amount and quality of starting material. Our automated sample handling procedures reduce the potential for technical variability so you can be assured that the differences you see are real.

You control the data and the intellectual property from your samples remains yours. At the end of the process, you receive a report that includes the initial sample QC measurements, all Affymetrix output files (.dat, .cel, .chp and .exp) as well as an Affymetrix .rpt (text) file and a spreadsheet of the data from the .chp file. We will send you your data on CD or DVD. (Additional media formats may be possible. Please inquire.)



## DATA ANALYSIS

Having generated a large amount of data, the time has come to analyze it. Very often the sheer volume of data can seem overwhelming. Our team of bioinformatics scientists is available to assist you in performing your analysis, from model-based algorithms and comparisons of gene expression levels to predictive analytics and the creation of biologic networks from your data. We will work with you to get to the bottom of your results and report the key findings of your work.



# THE PRECISION BIOMARKER RESOURCES ADVANTAGE

- + As **scientists** with a long history of cancer and neuroscience research, we understand the value of your samples. Having done our own research, we appreciate the hours and care that went into creating your samples and we will treat them with the care *they* deserve to provide you the results *you* deserve.
- + Our **expertise** in performing microarray experiments is available to you in planning and in analysis, providing you with a single point of contact from experiment conception to publication of your results.
- + Exhaustive **quality** control measures throughout the process mean that we start building quality into your results from the moment your samples arrive in our facility.
- + Affymetrix GeneChip® microarrays are all we do and we do them every day. Unlike many of our competitors, we do not split our attention between platforms or procedures. Consequently we are well practiced in providing you with the most **accurate** results possible.
- + Our services are **fast** and **reliable**. You could spend months setting up your own lab and years acquiring the expertise, or you could contact Precision Biomarker Resources and let us perform the work for you in just weeks.

Let **Precision Biomarker Resources** be *your* resource for expression profiling!

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