

Microarray Service Centre

We analyze. You discover.

- State-of-the-art facility
- Celera Discovery System offers the most comprehensive coverage available for human, mouse and rat genomes
- Applied Biosystems sensitive 1700 Chemiluminescent analysis platform maximizes discovery rate
- In-depth data analysis using Spotfire® and R-Bioconductor included in the service package
- Complete workflow support provided by expert scientists
- Downstream validation available using Applied Biosystems TaqMan® platform



LABINDIA Instruments Pvt Ltd., the exclusive distributor of Applied Biosystems products in India, offers a microarray service enabling researchers to utilize the power of microarray technology, using the Applied Biosystems Expression Array System. Located in Gurgaon, the service centre accepts projects from pharmaceutical, research and academic institutions.

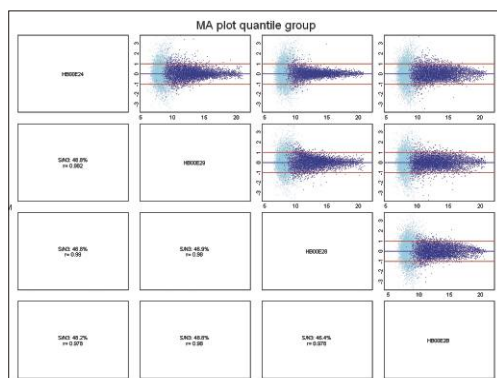
State-of-the-art Service Centre Managed by Highly Qualified Scientists



LABINDIA's Microarray Service Center (MSC) boasts a superbly equipped laboratory with the latest Applied Biosystems instruments, UV spectrophotometers, centrifuges, etc. to ensure that your precious samples are processed and handled with the greatest possible care. The laboratory will soon be obtaining accreditation from the National Accreditation Board for Testing and Calibration Laboratories (NABL).

The MSC is managed and run by highly qualified scientists with doctoral and post-doctoral degrees from abroad. Our scientific staff can provide you support at all levels from experimental design to data analysis.

In-depth Data Analysis and Support for Interpreting Data



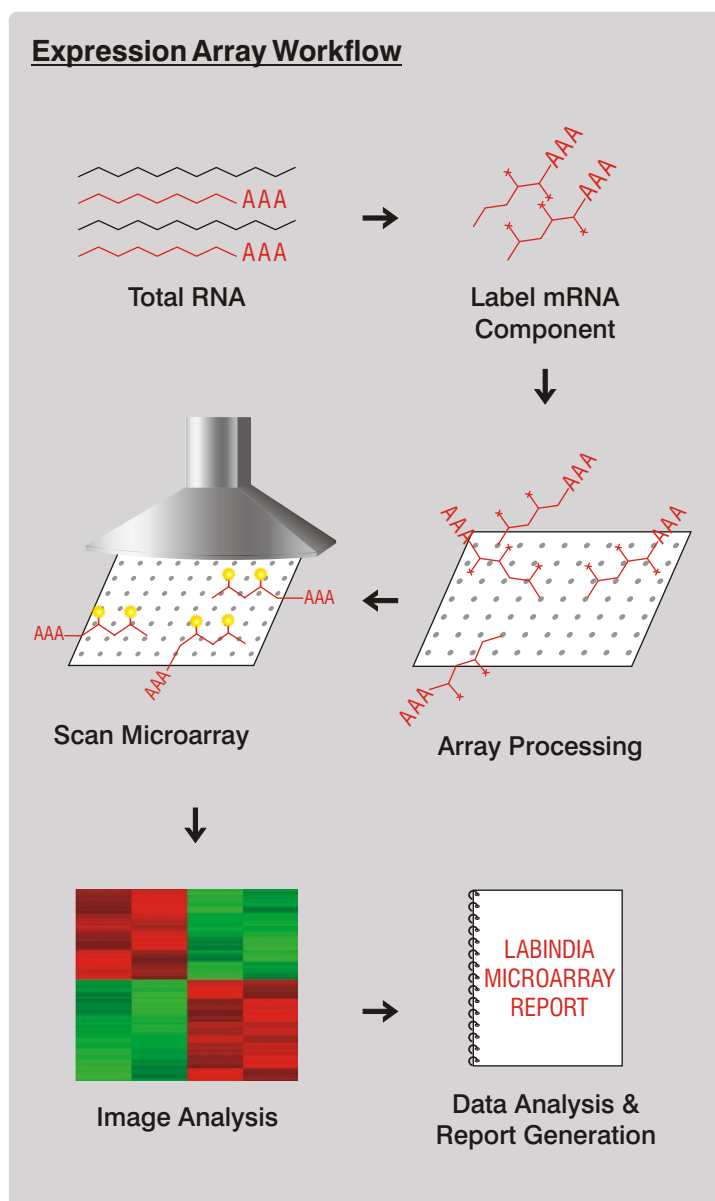
In depth analysis of the data using Spotfire® and R-Bioconductor is included with the service. In addition, the service also includes filtering of the data through the Panther Classification System™ if desired. These tools, powered with appropriate statistics, are used to perform comparative analysis on raw data and feature advanced queries and exportable graphical tools.

A report containing details of the assay, generated images, primary data analysis and data mining results including the graphics will be provided to all customers. An Application Support Scientist will also be available to discuss the data* and provide any downstream support as and when required.

** All data will be held in strict confidentiality by LABINDIA.*

Less than 1 µg of Total RNA Required to Obtain Expression Data

Customers are expected to send between 500 ng to 1 µg of total RNA per experiment. All the subsequent steps of the microarray experiment will be performed in house by our scientists. We also perform a quality check on each RNA sample to ensure that the highest quality microarray data can be obtained from every experiment.



Applied Biosystems 1700 Expression Array System



AB's 1700 Expression Array System is a complete platform that includes Human, Rat, and Mouse Genome Survey Arrays, a 1700 Chemiluminescent analyzer, data analysis software, labeling and detection kits.

Most Comprehensive Genome Coverage

The oligonucleotide probes for the Expression Array System are designed against high-quality, validated genes from the proprietary Celera Discovery System™ as well as curated RefSeq genomic data from the public domain, leading to the most comprehensive genome coverage in the market. For example the Human Genome Survey Microarray V2.0 contains 32,878 probes for the interrogation of 29,098 genes. 8000 of these genes are not covered by any other commercial microarray platform.

A Complete Integrated Gene Expression System

With the Expression Array System, all system components--microarray, analyzer, software and reagents, --are fully integrated and tested for you. This new system also integrates with Applied Biosystems real-time PCR-based products.

Chemiluminescence-Based Assay Enables Femtomolar-level Sensitivity

The Expression Array System's chemiluminescence-based detection chemistry is up to 40 times more sensitive than conventional fluorescence-based assays which enables the use of extremely limiting amounts of starting material. The femtomolar-level sensitivity of the platform allows detection of less than one transcript per cell.

Panther Classification System™ Offers Superior Annotations

The Panther Classification System classifies many more proteins than genomic databases available in the public domain. It also provides information on the location of probes and genes represented on the microarrays, maps genes and proteins to pathways and assists in the analysis of differentially expressed genes.

Service Packages

Labindia offers two levels of microarray service which are summarized in the table below

Microarray Service Package	Description	Turnaround Time
Standard Package	<ul style="list-style-type: none">• Label and process RNA sample• Hybridize to microarray, data analysis• Comprehensive report	2 weeks
Premium Package	<ul style="list-style-type: none">• Standard Package• RNA isolated from customer samples	< 3 weeks

Applications For Expression Profiling

Monitoring gene expression on a global scale using microarrays has evolved into the most powerful tool in the biologist's arsenal for obtaining penetrating insights into a variety of biological processes such as cell and organ development, pathogen infection, embryogenesis, progression of diseases such as cancer etc. Experiments performed on an array platform are perfectly suited for comparing gene expression in different cell populations. These include applications such as:

- **Expression Analysis** : Classical differential expression studies
- **Drug Discovery** : Target identification and validation
- **Toxicology Studies** : Gene expression profiling in response to drug treatment
- **Pharmacogenomic Studies** : Differences in response to drug treatment due to differences in gene expression between individuals

Microarray Data Validation

Microarray analysis is a powerful tool for profiling expression changes for the entire genome simultaneously. However, it is usually necessary to confirm the microarray results for the subset of genes that are being studied, using an independent technique such as real-time PCR. Applied Biosystems TaqMan Gene Expression Assays provide a versatile, sensitive (seven logs dynamic range) platform for validating array data. In addition to validation studies, TaqMan assays can also facilitate screening of a large number of biological samples for the genes of interest identified using arrays. The TaqMan chemistry is also available in a microfluidic card format via the TaqMan Low Density Array (TLDA) which contains pre-loaded assays for several genes of interest. Array panels for known pathways are available for studies in cancer, immunology, apoptosis, chemokines, diabetes and other regulatory mechanisms.

Please enquire about our services for large scale real-time PCR studies using the TaqMan platform.



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