

Microarray Screening

Introduction

Gene expression microarrays are widely used to simultaneously monitor the expression level of tens of thousands of transcripts, thus giving scientists valuable insights into complex biological systems.

As Agilent Certified Service Provider (CSP), IMGM offers a first-class gene expression microarray screening based on the proven Agilent DNA Microarray Platform.

Summary

- Agilent Certified Service Provider (CSP)
- Full accreditation for microarray analyses
- Long-standing experience in conducting microarray analyses
- Agilent microarrays provide superior sensitivity, high reproducibility, excellent flexibility and cost effectiveness
- Validated content with excellent annotation to various biological databases
- Option to use individually designed custom arrays
- Top-quality data as ideal basis for bioinformatic analysis
- Complete package consisting of Project consulting – RNA isolation – RNA quality control – Agilent microarray screening – Bioinformatics – Report
- Detailed easy-to-understand report
- TaqMan™-based hit validation service also available

Technology

At IMGM, Agilent's Whole Genome Microarray Platform is employed to analyze gene expression of human, mouse and rat total RNA samples. In addition, Agilent offers a large inventory of species specific catalog arrays (e.g. mammalian systems, model organisms and plants).

For the analysis of your gene set of interest, Agilent provides the opportunity to design custom arrays in various formats. We will create your personal microarray by either choosing from Agilent-optimized probes, uploading your probe sequences, or designing probes using the Agilent eArray tools.



Agilent 4-plex gasket slide in hybridization chamber

your partner for
genomic services

Agilent's microarray technology is based on 60-mer probes and fluorescence detection. It is characterized by superior sensitivity, high reproducibility and top-quality data, thus providing an ideal basis for downstream bioinformatic analysis.

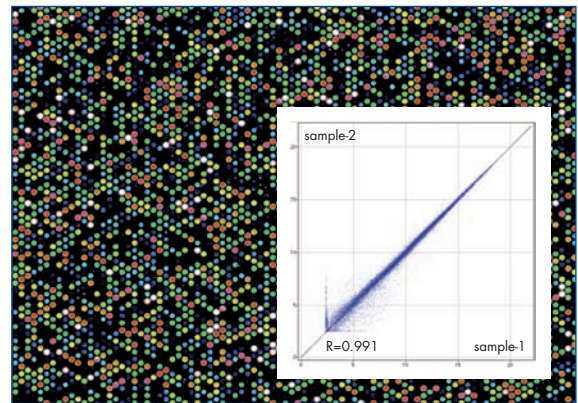
The Agilent-validated microarray content was derived from publicly available databases (e.g. RefSeq, Unigene, RIKEN) and features an excellent genome coverage. The represented genes and transcripts are well annotated and linked out to all essential genomic and proteomic databases.

Microarray Screening Service

IMG M Laboratories is an Agilent Certified Service Provider (CSP) and offers a complete solution for microarray-based gene expression analysis.

Our expert team assists you in the design of your study to ensure that all relevant parameters are considered and sound statistical data analysis can be performed.

You may make use of our professional RNA isolation service or directly send total RNA samples to IMG M. By employing state-of-the-art RNA quality control (Agilent Bioanalyzer), we ensure that only intact RNA samples enter the microarray workflow. Highly standardized labeling and hybridization procedures guarantee optimal raw data output.



Spotfire data analysis: intensity plot of replicate samples
(Data: Agilent 4 x 44K array slide)

IMG M's sample submission guidelines give recommendations on sample collection, storage and minimal amounts needed for successful microarray analysis. The guidelines can be downloaded from www.imgm.com.

Resulting expression data are fed into IMG M's bioinformatics pipeline to identify modulated genes. Databases such as Gene Ontology (GO) and Panther are then used to match these genes to signaling pathways, thereby adding biological meaning to your data.

Microarray results are provided together with a comprehensive and easy-to-read report. Our report features a material and methods section as well as a thorough description of the study results visualized with informative diagrams.

IMG M has a track record of successfully completing a high number of gene expression microarray studies. We are experienced in conducting large studies for customers coming from diagnostics, pharma, biotech and academia.

Quality management

IMG M is the first laboratory in Europe holding full accreditation for microarray-based gene expression analysis (DIN EN ISO/IEC 17025).

Our customers can rely on the fact that data is produced under well-controlled conditions by competent staff, and that all experimental steps are fully documented.