



« The ArrayIt H25K Human Genome Microarray

» The Genome-Wide Human SNP Array 6.0 from Affymetrix



## Array of Hope

### Higher output for greater chances

Because entire genomes can be represented on single gene-chips, or microarrays, the potential for a ground breaking discovery in human health is real. The tools below will help you make that discovery.

**H25K**, from **ArrayIt**, is a multi-purpose long oligonucleotide microarray that allows karyotyping, gene expression profiling, chromatin structure analysis, and protein-DNA interaction studies on a genomic scale. It is the world's first whole human genome microarray based on the completely sequenced human genome and derived from a fully annotated set of 25,509 human genes and 795 controls. This "next generation" microarray represents a significant advance over competing products derived from collections of expressed sequences tags and partially annotated sequence databases. The H25K includes kits for amplification and fluorescent labeling and is fully supported by ArrayIt SpotLight Scanners. **More information: [www.arrayit.com](http://www.arrayit.com)**

The **S&S Serum Biomarker Chip**, from **Whatman**, enables proteomics researchers to pattern the molecular signature of human serum. The chip addresses the need for high throughput technologies used to study and develop a range of research applications from risk stratification, to disease prognosis, drug eligibility, prediction of safety and efficacy, and therapeutic monitoring. Two-color fluorescent detection permits the researcher to reproducibly pattern the relative abundance of 120 human serum proteins between two samples, such as serum samples from diseased and healthy individuals. **More information: [www.whatman.com](http://www.whatman.com)**

Designed to minimize background during

microarray analysis, compared to traditional glass slides, **Nunc MicroArray Black Polymer NucleoLink Slides** are the first polymer slides optimized for covalent coupling of oligonucleotides and immobilization of PCR products. Researchers can also use Black Polymer NucleoLink slides for applications including SNP Analysis, stripping and rehybridization. For protein microarrays, the MicroArray Black Polymer MaxiSorp Slide, the first polymer slide specifically designed for protein binding, is recommended. All Nunc Black Polymer slides have dimensions identical to a typical glass slide, and can be used with the same settings for the printing and scanning process. Slides are encased in sleeves in packs of 5, which are conveniently packaged in a polypropylene box of 25 slides each. Researchers can also select from a wide range of MicroArray Glass Slides. Choices include surface coatings of aminosilane, poly-L-lysine, epoxy, aldehyde, gold thin film, and uncoated slides. The slides are encased in sleeves in packs of 5, and conveniently packaged in the Nunc mBox of 20 slides each. The mBox is sealed in foil, minimizing contamination and light exposure until use. Nunc also provides glass slides enhanced with a 3D surface in an etched format or polymer coating, and all slides can be serialized and barcoded upon request. **More information: [www.nuncbrand.com](http://www.nuncbrand.com)**

**Bio-Rad** introduces the **BioOdyssey Calligrapher miniarrayer** for printing arrays

onto glass slides, into 96 well microplates, or onto membranes, and the molecular imager PharosFX system for complex imaging applications involving multiple fluorescence wavelengths in gels, blots, microplates, and macroarrays. It allows multicolor detection of a wide range of fluorophores via direct laser excitation, high excitation efficiency, and precise spectral assignment. The system's excitation/emission filter combinations are designed to maximize the signal-to-noise ratio (SNR) and thus increase sensitivity. **More information: [www.bio-rad.com](http://www.bio-rad.com)**

**Eppendorf** has developed a new **transcription factor array** related to stem cells. With this kit, 12 activated transcription factors connected to stem cell differentiation, proliferation, or apoptosis can be monitored. Double-stranded DNA molecules are bound to a glass surface, then incubated with a nuclear protein extract and transcription factor activity is monitored with specific antibodies. Detection can be done with Eppendorf's Silverquant technology or with fluorescence. This kit enables the analysis of the status of a stem cell culture in just one experiment in a convenient and simple workflow. It can be used for human, mouse or rat samples. **More information: [www.eppendorf.com](http://www.eppendorf.com)**

**Illumina** announces the new **Human1M DNA Analysis BeadChip**, a solution that contains more than one million single-nucleotide polymorphisms (SNPs) on a single chip. In addition to targeting an extensive catalog of

» The Human1M DNA Analysis BeadChip from Illumina



known copy number variation (CNV) sites, the Human1M BeadChip contains novel CNV content, developed in collaboration with deCODE genetics. The comprehensive content of the Human1M BeadChip offers the scientific community the high genomic coverage, power, and value per sample. Powered by the Infinium assay, researchers are able to quickly obtain and publish results. **More information: [www.illumina.com](http://www.illumina.com)**

**GEArray** focused DNA microarrays from **GE Healthcare** are the ideal tools for studying gene expression associated with a biological pathway or disease state. Each pre-printed GEArray includes a thoroughly researched set of relevant, pathway or disease focused genes. Customized GEArrays allow you to select a panel of genes tailored to your specific research needs. It includes 100-500 relevant, pathway-specific genes, and requires as little as 0.1 µg total RNA. The focused design and data handling is easy and straightforward, allowing you to finish your research projects sooner. **More information: [www.gehealthcare.com](http://www.gehealthcare.com)**

The **Agilent DNA microarray scanner** is a 48-slide scanning system that can read any mix of 1 x 3" glass slide microarrays. Low level detection resulting from optimized precision optics, broad dynamic range, minimal spectral cross talk allows users to detect weak features and achieve rapid, accurate and dependable results. Enhanced sensitivity with dynamic autofocus keeps features in focus while scanning to minimize the effects of gradients and aberrations associated with glass slides. Extended dynamic range, with an industry-leading wide dynamic range of 105, allows for high sensitivity scanning without saturation. Simultaneous two-color scan-

ning at 5 and 10 micron resolution, is about 8 minutes per slide. Its integrated platform is complete with PC, barcode reader and image analysis software with feature information easily collected and seamlessly linked to statistical analysis and data interpretation.

**More information: [www.agilent.com](http://www.agilent.com)**

The **QArraymini** is a fully-featured compact microarrayer from **Genetix**, proven for DNA and protein arraying onto glass slides, ceramic slides, membranes slides or into microplate wells. High-resolution linear drives combined with the High Precision 48-pin printing head ensure exceptional array regularity and high speed printing of slides. The simple-to-use software allows maximum user control over array design and tracking of data. Applications include: DNA arrays, protein arrays, oligosaccharide arrays, glycoprotein arrays, CGH arrays, reverse transfection, RNAi analysis, and synthetic molecule arrays (SAR libraries). Spotter output files integrate seamlessly with all major microarray analysis packages. **More information: [www.genetix.com](http://www.genetix.com)**

**Affymetrix** introduces the **Genome-Wide Human SNP Array 6.0**, a single microarray that measures more than 1.8 million markers for genetic variation. This enables researchers to genotype more markers from more individuals at a lower cost per sample. These higher-powered studies increase the probability of discovering genes associated with adverse drug response or complex diseases, such as Alzheimer's, diabetes, heart disease and Parkinson's. The SNP Array 6.0 contains more than 900,000 single nucleotide polymorphisms (SNPs) and more than 946,000 non-polymorphic probes for the detection of copy number variation. Because it includes

**"Microarrays are pure magic. How audacious it is to decipher the human genome in a single step."**

**—Mark Schena, Ph.D.  
Visiting Scholar  
ArrayIt Life Sciences Division**

many of the common genetic variations that extend beyond the International HapMap Project, the SNP Array 6.0 enables researchers to better detect the genes associated with many different complex diseases affecting multiple ethnicities. Researchers can use the same array to test multiple study or disease hypotheses simultaneously, and the same meta analysis can be used across multiple cohorts. Developed in collaboration with the Broad Institute of Harvard University and the Massachusetts Institute of Technology, the SNP Array 6.0 features a state-of-the-art array probe design and improved data analysis algorithms. **More information: [www.affymetrix.com](http://www.affymetrix.com)** ■

**Companies Mentioned in this Product Spotlight:**

**ArrayIT:** [www.arrayit.com](http://www.arrayit.com)

**Affymetrix:** [www.affymetrix.com](http://www.affymetrix.com)

**Agilent:** [www.agilent.com](http://www.agilent.com)

**Bio-Rad:** [www.bio-rad.com](http://www.bio-rad.com)

**Eppendorf:** [www.eppendorf.com](http://www.eppendorf.com)

**Illumina:** [www.illumina.com](http://www.illumina.com)

**GE Healthcare:** [www.gehealthcare.com](http://www.gehealthcare.com)

**Genetix:** [www.genetix.com](http://www.genetix.com)

**Nunc:** [www.nuncbrand.com](http://www.nuncbrand.com)

**Whatman:** [www.whatman.com](http://www.whatman.com)

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