

Working with genes

Gene expression, analysis, hybridization and delivery.



ABI's PRISM 3100-Avant.

Genetic analyser

Applied Biosystems

<http://home.appliedbiosystems.com>

Entry-level genetic analyser

The ABI PRISM 3100-Avant Genetic Analyser is a four-capillary electrophoresis system for low- to medium-throughput DNA analysis. Increased sensitivity and efficiency of the system is claimed to reduce the amount of DNA required per sample injection, making it extremely cost-effective. The 3100-Avant can be upgraded to 16-capillary ABI PRISM 3100 Genetic Analyser specification. The analyser uses ABI PRISM BigDye Terminator chemistries for sequencing and five-dye chemistries for fragment analysis.

JetPEI transfection reagents

Qbiogene

www.qbiogene.com

Efficient gene delivery with low toxicity

This new line of cationic polyethylenimine (PEI) derived transfection reagents has been developed for gene delivery to various established cell lines and primary cells. An affordable and well-characterized alternative to liposome-based transfection, jetPEI reagents are claimed to provide effective and highly reproducible gene and oligonucleotide delivery with low residual toxicity. The jet-PEI line includes reagents for targeting specific adherent and suspended cell types. jetPEI Transfection Reagents have been used successfully with over three dozen different cell lines.

Human genes

Cambridge BioScience www.bioscience.co.uk

Full-length genes for functional genomics

Cambridge BioScience now offers 10,000 human full-length cDNA clones in the UK and Ireland. The clones are produced by OriGene Technologies and represent about 70% of the mRNA sequences annotated by the National Centre for Biotechnology Information. OriGene aims to assemble a collection

of full-length cDNA clones for every human gene. To search for a specific gene go to www.bioscience.co.uk and enter the gene's NM accession number or nucleotide sequence, or perform a BLAST search. Alternatively, search for multiple genes with specific structural and functional domains. Plasmid DNA containing an insert of the appropriate cDNA fragment is provided in a dry filter, ready for elution and transformation into a competent bacterial host.

Gene delivery system

Stratagene

www.stratagene.com

No help required

The AAV Helper-Free System is a gene delivery system intended for stable, long-term gene expression. It is based on recombinant adeno-associated virus (AAV) technology but eliminates the need for helper virus. Stratagene says that high-efficiency gene delivery is possible for a broad range of hosts, overcoming the limitations of traditional transfection methods. AAV is naturally replication-deficient and normally requires coinfection with an unrelated helper virus to generate AAV virions. Stratagene's system uses a vector containing the necessary genes from adenovirus (pHelper vector) to induce the lytic phase of AAV producing recombinant, replication-defective AAV virions ready to deliver a gene of interest to target cells.

Nucleon

Tepnel Life Sciences

www.tepnel.com

Easily disposed of

The Nucleon range of DNA purification kits has been extended with the addition of two new chloroform-free kits for the purification of genomic DNA from whole blood and mousetails. To eliminate concerns over the use and disposal of chloroform the new kits use no organic solvents and do not generate any chlorinated waste by-products. As the Nucleon DNA extraction system is not based on a column format, scale-up to large sample volumes is simple and economical.

GeneXPRO Contract Services

InnoGenex

www.innogenex.com

Out with it

GeneXPRO contract services make it possible to outsource gene expression profiling, target localization and analysis of cellular and tissue level expression. The company's gene profiling services include design, synthesis and labelling of the probes, correlation of gene expression profile with normal and patho-

genic conditions on cells, tissues and tissue arrays and determination of changes in gene expression in response to candidate drugs. Assays include *in situ* hybridization to determine gene expression in different cells and tissues at different developmental stages.

Tm Analysis System

Shimadzu

www.shimadzu.com

Thermal melt analysis

Intended for antisense, antigene and hybridization studies, the Shimadzu Scientific Instruments Tm Analysis System complements Shimadzu's range of UV-visible spectrophotometers. The Tm Analysis System monitors nucleic acid dissociation as temperature is raised by following absorbance changes at user-specified wavelengths and determines the melting temperature at which half of the double stranded form separates. The thermodynamic parameters obtained enable the prediction of thermal stability and structure of nucleic acids, target validation by antisense and antigene methods, as well as analysis and optimization of a variety of techniques based on hybridization phenomena.

These notes are compiled in the Nature office from information provided by the manufacturers.