

### REAL-TIME PCR SYSTEM

The new BioMark HD Real-time Polymerase Chain Reaction (PCR) System is the company's most advanced instrument for genomic analysis. The BioMark HD platform continues to support all the applications of the original BioMark System, including gene expression, single-cell gene expression, and genotyping. Using Digital Array chips, the BioMark HD System performs common digital PCR applications, such as mutation detection, copy number variation, and absolute quantitation of nucleic acid sequences. The system is designed for researchers who require the sensitivity and throughput needed to study gene expression down to the single-cell level—especially those who have limited amounts of sample or study rare populations of cells. A new fast thermal cycling protocol is compatible with commercially available assays and yields data that is equal in quality to standard cycling protocol data.

Fluidigm

For info: 866-358-4354 | [www.fluidigm.com](http://www.fluidigm.com)



### MYCOPLASMA DETECTION KIT

The Universal Mycoplasma Detection Kit brings together universal primers, optimized reagents, and touchdown polymerase chain reaction (PCR) to offer a highly sensitive and specific assay at an economical price. The kit provides all the components needed for an optimized PCR reaction, including buffers for cell lysis, sample lysis tubes, PCR mixes, and primers. Universal primers that are specific to the 16S rRNA coding region in the *Mycoplasma* genome are used with a thermostable DNA polymerase. Touchdown PCR avoids amplification of nonspecific sequences, and increases specificity to the extent that DNA originating from other sources is not amplified. In approximately three hours, the kit will detect as few as 10 genomes of *M. arginini*. The ATCC Kit is highly selective recognizing over 60 species of *Mycoplasma*, *Acholeplasma*, *Spiroplasma*, and *Ureaplasma* including the eight species most likely to contaminate cell cultures: *M. arginini*, *M. fermentans*, *M. hominis*, *M. hyorhinis*, *M. orale*, *M. pirum*, *M. salivarium*, and *A. laidlawi*.

ATCC

For info: 800-638-6597 | [www.atcc.org](http://www.atcc.org)

### PREDESIGNED qPCR ASSAYS

Well-designed real-time polymerase chain reaction (qPCR) assays require the careful consideration of primer placement, specificity, avoidance of SNPs, oligo interactions, and accurate  $T_m$  calculations. In order to meet these requirements, PrimeTime<sup>®</sup> Predesigned qPCR Assays are offered for all genes in the human, mouse, and rat genome. These assays avoid any cross-reactivity within that genome, known SNPs, and primer interactions, while providing full disclosure of all sequence information, as recommended by MIQE guidelines. By including the ZEN double-quenched probes, these assays provide outstanding levels of sensitivity, with the added security of knowing the precise probe location. The ZEN double-quenched probe technology increases the accuracy and reliability of 5' nuclease qPCR experiments by positioning an internal ZEN quencher nine bases from the 5' fluorophore. When combined with the standard 3' quencher, this significantly decreases background fluorescence and increases sensitivity.

Integrated DNA Technologies

For info: 800-328-2661 | [www.idtdna.com](http://www.idtdna.com)

### CHROMATIN ANALYSIS KIT

The new EpiQ chromatin analysis kit is a real-time polymerase chain reaction (qPCR) assay for the rapid quantitative assessment of chromatin structure. Complementing existing epigenetic assays such as DNA methylation and chromatin immunoprecipitation, the EpiQ kit is the first commercial research tool that helps scientists quantify the impact of epigenetic events on gene expression regulation through chromatin state changes. The EpiQ kit can provide quantitative information about chromatin accessibility, which correlates very strongly with gene expression. With the EpiQ kit, chromatin structure data can be obtained within six hours from as few as 50,000 cultured cells, without the need for nuclei isolation. The kit includes buffers for cell permeabilization and in situ chromatin digestion, optimized nuclease, materials for genomic DNA purification, control assays (qPCR primers) for chromatin assessment of a reference (epigenetically silenced) and control (constitutively expressed) gene, and EpiQ Chromatin SYBR Green Supermix, a real-time PCR reagent designed to amplify genomic DNA.

Bio-Rad

For info: 800-424-6723 | [www.biorad.com](http://www.biorad.com)

### THERMAL CYCLERS

Two new thermal cyclers, the Piko and the Arktik, are designed to meet the needs of a broad range of researchers, for applications covering individual polymerase chain reactions through to high throughput projects. The Piko Thermal Cycler provides best-in-class thermal performance, fast ramping rates, and quick settling times, offering excellent PCR efficiency and well-to-well consistency within an extremely compact footprint. The Piko also uses ultrathin-walled (UTW) vessels for better temperature transfer, which enables protocols to be completed more quickly. The Arktik Thermal Cycler provides the flexibility of three interchangeable blocks for standard 96-, 384-, and 2x48-well PCR plates. Both the Piko and Arktik Thermal Cyclers feature highly intuitive user interfaces, with a clear display of protocols for highly efficient programming and operation.

Thermo Fisher Scientific

For info: 800-235-9880 | [www.thermoscientific.com](http://www.thermoscientific.com)

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# Science

## New Products

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