Fluorescent Differential Display on the FMBIO®

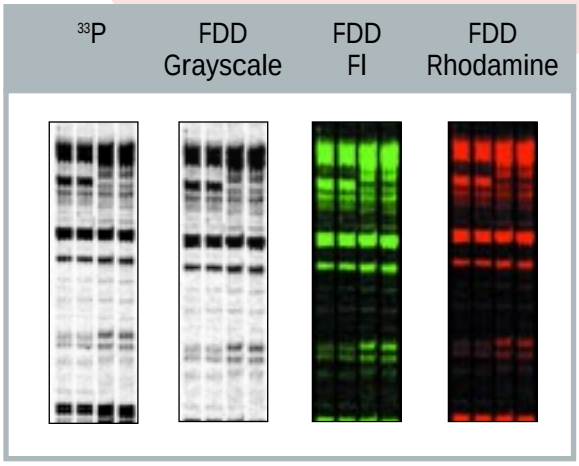
Differential Display

Researchers working in cell and tumor development, drug discovery, pathology and other disciplines often share the need to observe and identify unique as well as differentially expressed transcripts. Because of its simplicity, sensitivity, and reproducibility, differential display (DD) has become the method of choice for most researchers.

There are, however, limitations associated with DD. For example, if the goal is to identify the majority of differential expressed transcripts, a large number of primer combinations is required to ensure complete coverage of mRNA populations. Similarly, DD using radioactivity can take days to produce data and produces hazardous waste. Finally, gel drying and subsequent band excision are tedious and time consuming.

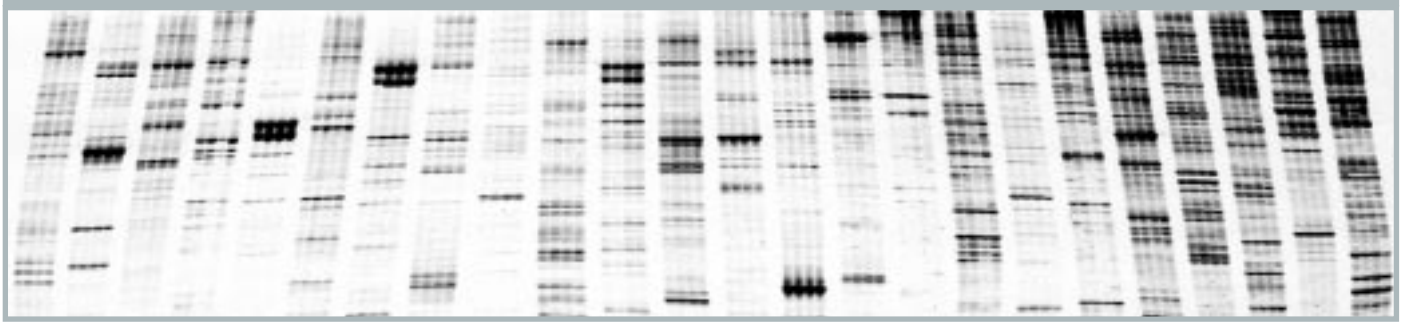
A Look at Evolution in Progress

A quantum leap in the evolution of DD combines the power of fluorescence with post-electrophoresis detection on the FMBIO Fluorescent Imaging System. The new RNAspectra™ kits, developed in collaboration with GenHunter Corporation, offer equivalent sensitivity to radioactive labeling. When used in combination with the FMBIO, successful results can be achieved from the very first run.



The RNAspectra™ kits feature a new generation of DD technology, fluorescence, with sensitivity that meets or exceeds that of ^{33}P. Multi-color capability ushers in new possibilities for DD discovery.

Massive Parallel Differential Display (MPDD)



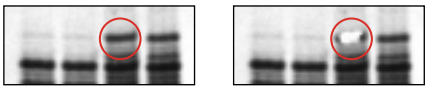
High-throughput FDD (132 lanes per gel) offers unparalleled opportunity for analytical discovery and screening. Data graciously provided by GenHunter Co.

HITACHI Genetic Systems
By Hitachi Software Engineering

Now in a Single Day You Can:

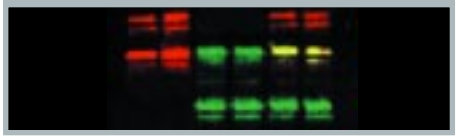
- Perform hundreds of side-by-side comparisons of cDNA patterns offering access to 96% of mRNA populations with our high-throughput electrophoresis system.
- Excise virtually any band(s) directly from the gel, without drying, using our simple "image-overlay" method.
- Perform multi-color analyses, effectively doubling sample throughput.
- Visualize and quantify a wide range of expression levels, including subtle changes in expression by adjusting gray-level settings.
- Obtain results that meet or exceed those of ^{33}P.

Accurate Band Excision



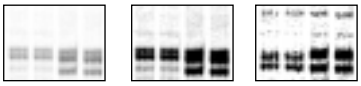
Post-electrophoretic detection makes band recovery possible.

Multiplexed FDD



Double your sample throughput with multi-color analysis.

Gray Level Adjustment



Detect subtle changes in expression.

FMBIO Specifications

Laser:	Solid-state 532 nm YAG laser
Scan Area and Time:	20 cm x 43 cm dual color at standard resolution: 10 minutes
Detection Wavelengths:	Up to 4-color separation, selectable from 500 nm to 700 nm
Dynamic Range:	4 orders of magnitude
Compatible Dyes:	For a complete list please visit our Web site
Multiplex Dye Sets (filter):	• 6-Fam (505 nm), Hex (585 nm) , Texas Red (650 nm) • 6-Fam (505 nm), Hex (560 nm), Ned (585 nm), Rox (605 nm) • Filters for novel dye sets are also available

www.miraibio.com

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By Hitachi Software Engineering

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