

Leica MM Cell Health powered by MetaMorph®

Analysis Software Drop-in for Leica MM AF

- Analysis of three fluorescent probes
- Adaptive Background Correction™ for improved segmentation
- Field and Cell-by-Cell data logging

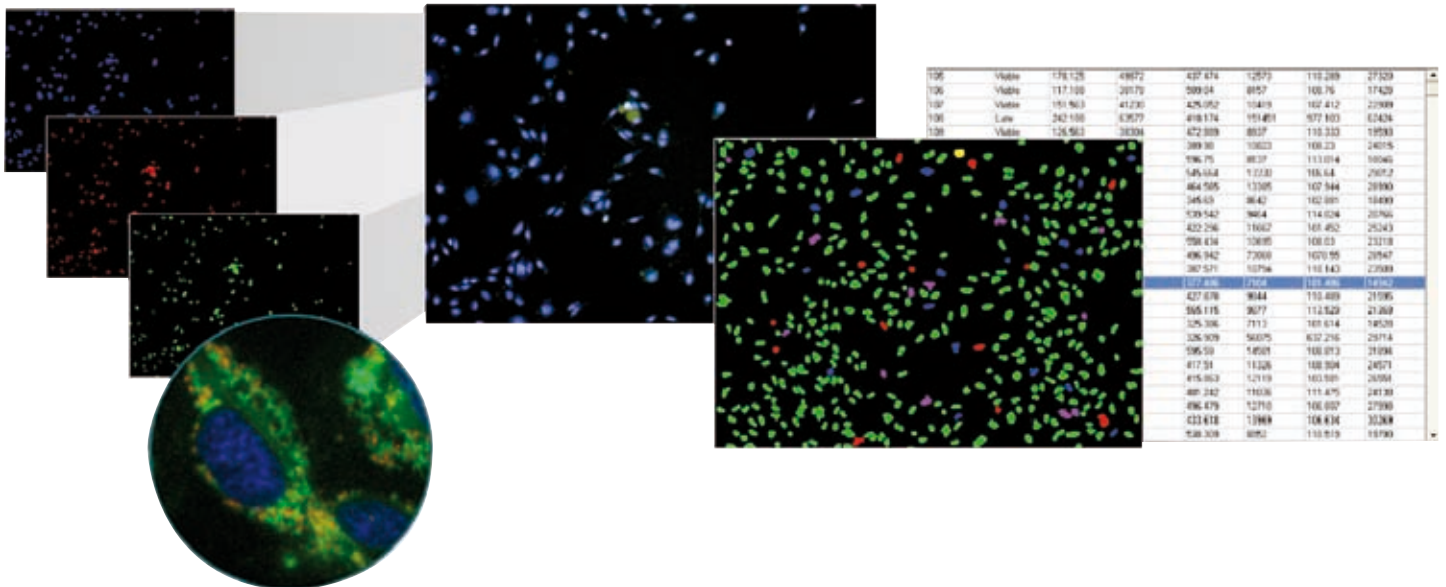
In some diseases, such as cancer, mutations may cause apoptotic pathways to malfunction, allowing uncontrolled proliferation of tumorigenic cells. In contrast, premature cell death is a problem in many neuronal diseases, including Parkinson's and Alzheimer's, as well as in many immune and autoimmune diseases.

Cell-based assays provide an efficient method for discriminating anti-proliferative effects from induction of apoptosis or necrosis.

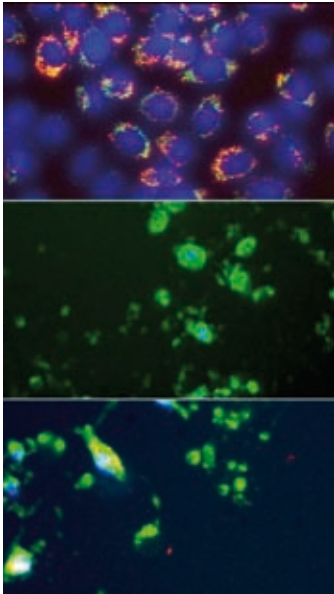
The Leica MM Cell Health for Leica MM AF software is designed for the analysis of cell-based assays of apoptosis and necrosis using three different dyes.

The module utilizes Adaptive Background Correction adapting the cell detection algorithm to the local intensity ranges between and within cells to provide the most robust segmentation available. This technique enables probe detection even with highly variable background fluorescence within a single image.

The simple interface minimizes setup efforts and at the same time enables users to customize the settings and measurements to obtain the best possible results specific to the type of cells used in the experiments.



Living up to Life



Multiple probes acquisition

Adherent Chinese Hamster Ovary (CHO-K1) cells were incubated with various concentrations of staurosporine. From top to bottom: control, 0.1 μM staurosporine, and 3 μM staurosporine. BIOMOL International's Mit-E- Mitochondrial Permeability Detection (Hoechst 33342 + JC-1). Courtesy of BIOMOL International.

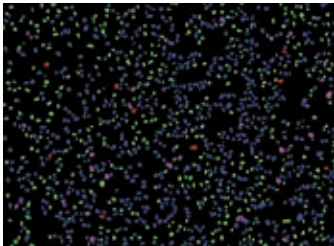
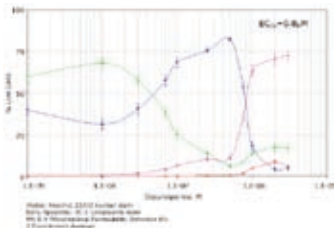


image analysis

Measurements can be exported to a spreadsheet program for further analysis. Green: viable, blue: early apoptotic, purple: late apoptotic, red: necrotic. Green: viable, blue: early apoptotic, purple: late apoptotic, red: necrotic.



Data export for further analysis

Configuration for Analysis

1. Select the nuclear stain image
2. Set the minimum and maximum width
3. Determine the intensity above local background
4. Select the apoptotic stain image
5. Specify the stained area (nucleus, cytoplasm or both)
6. Set the minimum and maximum cell width
7. Determine the intensity above local background
8. Repeat steps 4-7 for dead staining
9. Optionally choose the reporting parameters

Interactive data display

Once the analysis is run, the Cellular Results table allows you to interactively view individual cells' data. Clicking one or multiple cells in the image highlights the data for the selected cell(s) in the table.

Customization through journaling

Journals are sophisticated and powerful macros that record and perform a series of tasks without the need for a programming language. The Angiogenesis module can be incorporated into a Leica MM AF journal to increase the customization and automation of your analysis.

Multi-parameter analysis

The Application Module can generate a broad range of parameters, including:

- Counts of viable, early and late apoptotic, and necrotic cells
- Percent of viable, early and late apoptotic and necrotic cells
- Area, integrated and average intensity of nuclei

Powerful data export capabilities

All measurements can be directly exported to a text file or Microsoft® Excel® for further analysis.

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