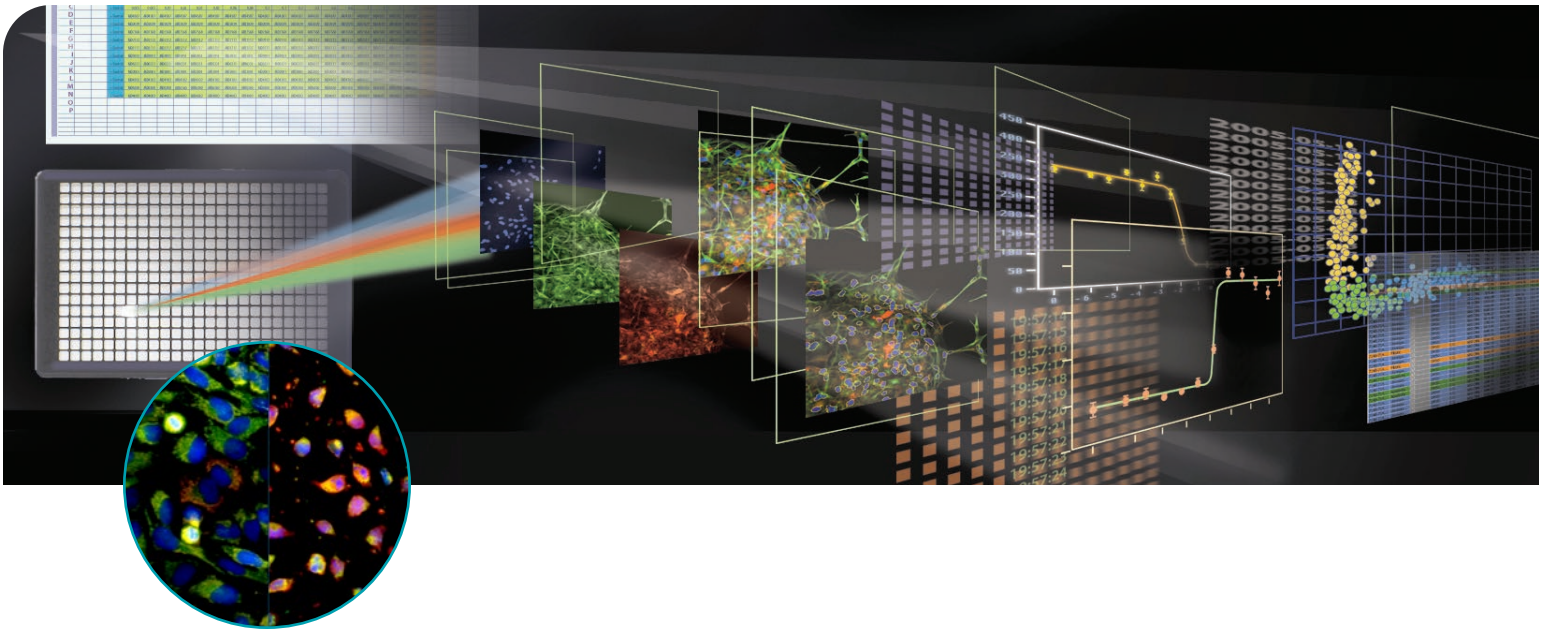
Molecular Devices

MetaXpress Software Translocation Application Modules

ANALYSIS DROP-INS FOR METAXPRESS SOFTWARE AND METAXPRESS POWERCORE HIGH-THROUGHPUT IMAGING OPTION



- → MEASURE CORRELATION BETWEEN PROBES AND COMPARTMENTS
- → TWO MODULES TO FIT YOUR NEEDS AND COMPLIMENT THE MULTI-WAVELENGTH TRANSLOCATION APPLICATION MODULE
- → SUPERIOR SEGMENTATION ALGORITHMS AND ADAPTIVE BACKGROUND CORRECTION
- → IMAGE-BY-IMAGE AND CELL-BY-CELL DATA LOGGING
- → COMPATIBLE WITH METAXPRESS POWERCORE HIGH-THROUGHPUT IMAGE ANALYSIS OPTION

The Translocation and Translocation-Enhanced Application Modules for MetaXpress® Software from Molecular Devices compliments the suite of application modules for the quantification of cellular signaling events and intracellular trafficking, which includes the Multi-Wavelength Translocation, Cell Scoring and Multi-Wavelength Cell Scoring Application Modules. They provide quantitative measurements of correlation between probes and compartments to assess the movement of molecules from one intracellular location to another,.

The Translocation Application Module is ideal for images that need a minimum amount of adjustments. The Translocation-Enhanced Application Module offers additional flexibility for images that require manual adjustments.

The modules utilize Adaptive Background Correction feature, which adapts the detection of features to the local intensity ranges and shape features within and between cells to provide the most robust segmentation available in an image-based screening system.

Once analysis is completed, the resulting segmentation is overlaid on the original compartment image, displaying positive compartments as green and negative compartments as red.

Both modules feature the fastest image acquisition and analysis through integration with Molecular Devices' complete solution for cellular imaging:

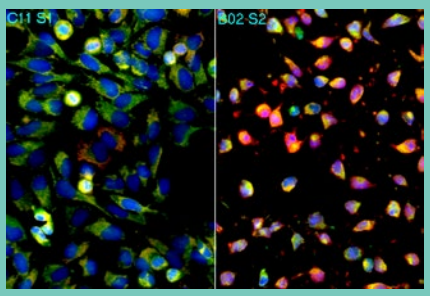
- → ImageXpress® High-Content Imaging Systems
- → MetaXpress® PowerCore™ Software for high-throughput image analysis
- → AcuityXpress™ Software for quality control and data analysis

EASY CONFIGURATION FOR ANALYSIS

1. Select the compartment and translocation probe images
2. Set the compartment width
3. Determine the intensity above local background
3. Specify the correlation coefficient cut-off
4. Optionally specify the reporting parameters

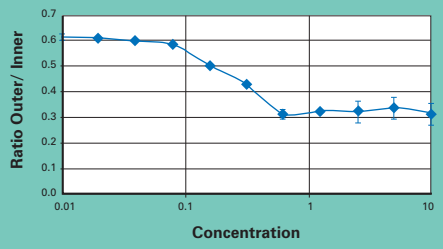
The Translocation-Enhanced dialog box offers additional flexibility by allowing users to set

Mitochondrial Translocation

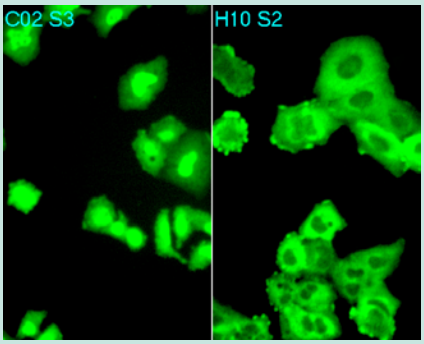


HeLa cells treated with Staurosporine and stained with MitoTracker (red), DAPI (blue) and anti-Cytochrome C (green).

Mitochondrial CytC Translocation

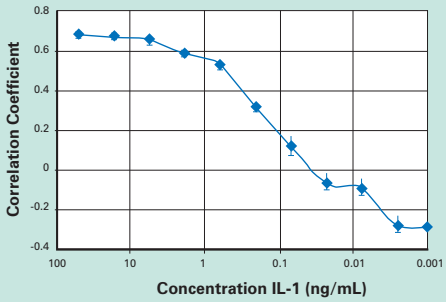


Nuclear Translocation



A549 cells labeled with anti-NFkB and an Alexa 488 conjugated secondary antibody. Left: nuclear translocation.

Nuclear NFkB Translocation



minimum and maximum compartment area and define the translocation probe regions for measurements.

MULTI-PARAMETER ANALYSIS

The application modules can generate a broad range of parameters that users can selectively report, which include:

- Compartments
- Mean compartment area
- Correlation coefficient
- Integrated inner and outer intensity
- Average inner and outer intensity
- Number and percentage of classified positives

INTERACTIVE DATA DISPLAY

Once the analysis is run, the Cellular Results table allows you to interactively view individual cells' data. Clicking a cell in the image highlights the data for the selected cell in the table.

FURTHER CUSTOMIZATION THROUGH MACROS

MetaXpress Software and the Neurite Outgrowth Application Module are seamlessly integrated with the flexibility of MetaMorph® Software and its advanced automation macros. These powerful macros record and perform a series of tasks without the user having to know a programming language.

THE FASTEST WORKFLOW FROM ACQUISITION TO HIT SELECTION

Image acquisition with ImageXpress Systems provides the fastest read times for large libraries and great flexibility in acquisition setup for research through screening. On-the-fly cell counting ensures a pre-defined number of cells is captured and decreases image acquisition times.

Image analysis can be distributed to the high-throughput image analysis platform, MetaXpress PowerCore Software, providing unparalleled performance in the race to identify "hits." Increasing image analysis speed by 10-to 30-fold virtually eliminates image analysis bottlenecks and enables multiple ImageXpress systems to run in parallel.

High-end hit selection and quality control is available through AcuityXpress Software, the data analysis software integrated in Molecular Devices' complete imaging solution. AcuityXpress Software features an interactive drill down for bidirectional interaction between images and numerical data.

ORDERING INFORMATION

MetaXpress Software Translocation and Translocation-Enhanced Application Modules
Part Number: 9500-0014

SALES OFFICES

- USA & Canada +1-800-635-5577
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