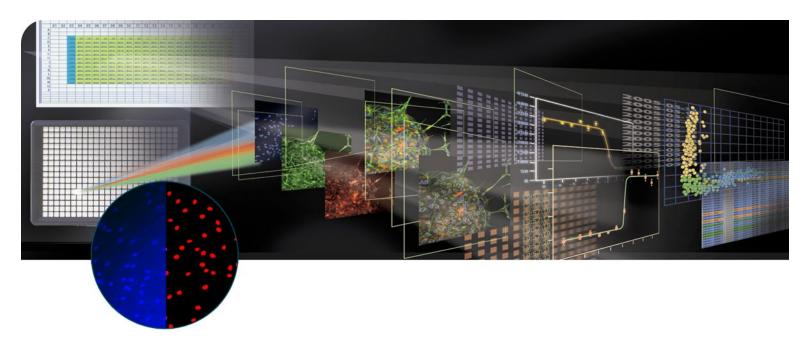


MetaXpress Software Count Nuclei Application Module

ANALYSIS SOFTWARE DROP-IN FOR METAXPRESS SOFTWARE



- → COUNT NUCLEI OF MOST CELL TYPES
- → ACCURATE SEGMENTATION OF TOUCHING CELLS
- → RUNS ACROSS ENTIRE DATA SETS AUTOMATICALLY
- → ADAPTIVE BACKGROUND

 CORRECTION FOR IMPROVED

 SEGMENTATION

The Count Nuclei Application Module for MetaXpress® Software from Molecular Devices is designed to automate accurate counting of nuclei of most types of cells.

The module accurately counts nuclei even when the background fluorescence in one imaged area is greater than the nuclei fluorescence in another area, providing superior background compensation compared to simple thresholding.

The module utilizes Adaptive Background Correction (ABC) which adapts the detection algorithm to the local intensity ranges between and within cells to provide the most robust segmentation available in an image-based screening system.

ABC enables probe detection even with highly variable background fluorescence within a single image.

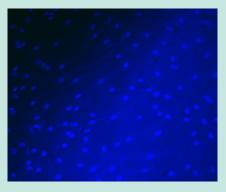
This simple yet powerful module has a userfriendly interface to minimize set-up efforts, while providing the flexibility to customize the settings to the type of cells used in a specific experiment. Analysis set-up can be done in two easy steps, and the settings can be applied to an entire plate with one click.

Image Acquisition

B02	B03	B04	805	B06
C02	C03	C04	C05	C06
D02	D03	D04	D05	D06

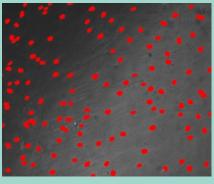
Images acquired with the Discovery-1[™] System from Molecular Devices.

Assay Configuration



Select a sample image to configure your settings.

Robust Segmentation and Analysis



The Count Nuclei module identifies nuclei, taking into consideration nuclear size and varying background. Once the parameters are set, the resulting segmentation is overlaid on the original image for rapid parameter setup and visual detection verification.

Data Exporting

506.24	430.8	5 41	9.95 436.52	444.47		
393.63	440.7	6 41	6.52 414.59	416.72		
416.07	465.1	4 44	5.54 454.64	457.03		
			Α	В	С	D
			Cell:		Cell:	Cell:
			Assigned	Cell:	Integrated	Average
		1	Label#	Area	Intensity	Intensity
		2	1	7.53121	36131	547.439
		3	2	8.55819	29051	387.347
		4	3	10.0416	30912	351.273
		5	4	10.9545	36336	378.5
		6	5	11.4109	47104	471.04
		7	6	11.6391	40765	399.657
		8	7	12 3238	58498	5/1 6/8

The assay can be run on the entire plate and measurements can be exported for further analysis.

CONFIGURATION FOR ANALYSIS

- 1. Select minimum and maximum nuclear size
- 2. Set the sample intensity level above the local background

More complex automated analysis can be achieved by running this application module with other built-in analysis functions.

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.

CUSTOMIZATION THROUGH MACROS

MetaXpress Software is seamlessly integrated with the power and flexibility of MetaMorph® Software and its sophisticated and powerful macros, called journals, that record and perform a series of tasks without the need for a programming language.

VALIDATED DATA

Development of application modules includes research and testing with a library of in-house and third-party data sets.

POWERFUL DATA EXPORT CAPABILITIES

All measurements can be directly exported to ORACLE®, Microsoft® SQLTM, text file or Microsoft® Excel®.

MULTI-PARAMETER ANALYSIS

The module generates a number of field or cellby-cell parameters users can selectively report, including:

- → Total nuclei
- → Total and mean area
- → Integrated and average intensity

ORDERING INFORMATION

Count Nuclei Application Module for MetaXpress Software
Part Number: 9500-0017

FOR MORE INFORMATION

Check our web site

www.moleculardevices.com/mx

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