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Molecular Devices ImageXpress Micro XLS HCS



Introduction

The ImageXpress® Micro Widefield High Content Screening System from Molecular Devices is a powerful, fully integrated cellular imaging and analysis platform. Designed for rapid, automated screening of fluorescently labeled biological samples in microplates, it excels at high-content, long-term live-cell fluorescence imaging. Optimized for multiwell formats, the system supports large-scale studies with precision and efficiency, making it ideal for drug discovery, phenotypic screening, and time-lapse live-cell imaging.

Camera

- *Andor Zyla 4.2 sCMOS (monochrome)*

Applications

- *Fast automated acquisition*
- *Fluorescence microscopy*
- *Brightfield microscopy*
- *Phase contrast microscopy (20x only)*

- *Multi-well plates up to 1536 wells, chamber slides*
- *Live cell imaging - multi-site, multi-wavelength*
- *Z series*
- *Tile-scanning*

Software

- *MetaXpress, Custom Module Editor, Autoquant deconvolution*
- *Application modules; Angiogenesis • Cell Cycle • Cell Health • Live/Dead • Multiwavelength Cell Scoring • Neurite Outgrowth • Transfluor • Translocation • Multi Wavelength Translocation • Micronuclei • Granularity*

Specifications

- *Objectives: 2x - 2x/0.1 NA CFI Plan Apochromat, 4x/0.2 NA S Fluor, 10x/0.3 NA Plan Fluor, 20x/0.45 NA CFI Super Plan Fluor ELWD ADM (phase contrast), 40x/0.6 NA S Plan Fluor ELWD, (all air/dry lenses)*
- *Environmental control - heating and 5% carbon dioxide gas supply*
- *XYLIS XT720S light source for fluorescence imaging, white LED for transmitted light imaging*
- *Lumencor Spectra X for fluorescence imaging (filter specifications below); 100 W Halogen lamp for transmitted light microscopy*
- *Hardware (laser-based) autofocus capability*
- *Software (image-based) focusing capability*

Fluorescence filter sets

Cube	Filter	LED	Exc. range	Exc. peak	Dichroic	Em. range	Em.peak
Dual 1	*DAPI*	*UV 380-410 nm*	*381-399 nm*	*390/18 nm*	*403 nm*	*412-455 nm*	*433 nm*
Dual 1	*FITC*	*Cyan 460-490 nm*	*461-490 nm*	*485/20 nm*	*502 nm*	*508-553 nm*	*530 nm*
Triple 4	*DAPI*	*UV 380-410 nm*	*381-399 nm*	*390/18 nm*	*436 nm*	*445-469 nm*	*457 nm*
Triple 4	*FITC*	*Cyan 460-490 nm*	*484-504 nm*	*494/20 nm*	*514 nm*	*518-542 nm*	*530 nm*
Triple 4	*TRED*	*Green 535-600 nm*	*561-590 nm*	*575/25 nm*	*604 nm*	*612-643 nm*	*628 nm*
Quad 5	*DAPI*	*UV 380-410 nm*	*381-399 nm*	*390/18 nm*	*410 nm*	*419-460 nm*	*440 nm*
Quad 5	*FITC*	*Cyan 460-490 nm*	*474-496 nm*	*485/20 nm*	*504 nm*	*507-533 nm*	*521 nm*
Quad 5	*TRITC*	*Green 535-600 nm*	*540-558 nm*	*549/15 nm*	*582 nm*	*587-625 nm*	*607 nm*
Quad 5	*Cy5*	*Red 620-750 nm*	*644-656 nm*	*650/13*	*669 nm*	*675-723 nm*	*700nm*
Triple 2	*DAPI*	*UV 380-410 nm*	*381-399 nm*	*390/18 nm*	*403 nm*	*412-452 nm*	*433 nm*
Triple 2	*FITC*	*Cyan 460-490 nm*	*461-490 nm*	*475/28 nm*	*497 nm*	*503-531 nm*	*517 nm*
Triple 2	*TRITC*	*Green 535-600 nm*	*540-558 nm*	*549/15 nm*	*574 nm*	*580-648 nm*	*613 nm*
Dual 3	*YFP*	*Teal 500-520 nm*	*503-516 nm*	*513/22-25 nm*	*523 nm*	*531-560 nm*	*546 nm*
Dual 3	*CFP*	*Blue 425-444 nm*	*425-444 nm*	*438/29-25nm*	*462 nm*	*470-490 nm*	*480 nm*

Sample requirements

- *The IXM microscope stage requires multi-well plates to have a base footprint of 128mm x 86mm, with at least 3 square corners present. Please check that your plate meets these requirements. For example, the NUNC 142475 24 well plate and the NUNC 150628 12 well plate do not fit the stage so cannot be used as three of the corners are cut off. Please provide your multi-well plate or chamber slide catalogue number when you make an enquiry. Every plate needs to be calibrated for the system so you may need to supply us with a blank plate for this purpose if it has not been used before.*

Contact person

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