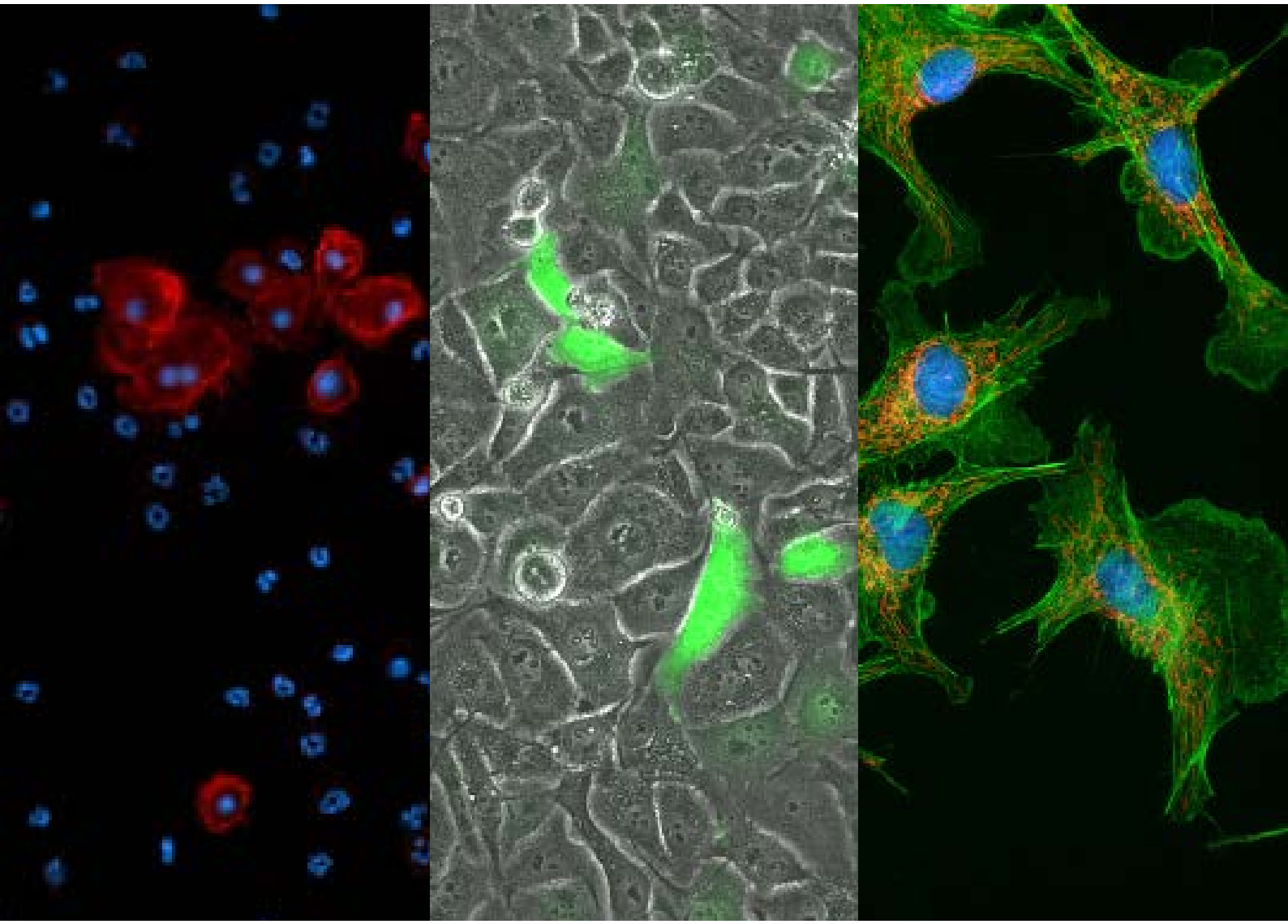
EVIDENT™

OLYMPUS

Digital Microscope Camera

DP23M

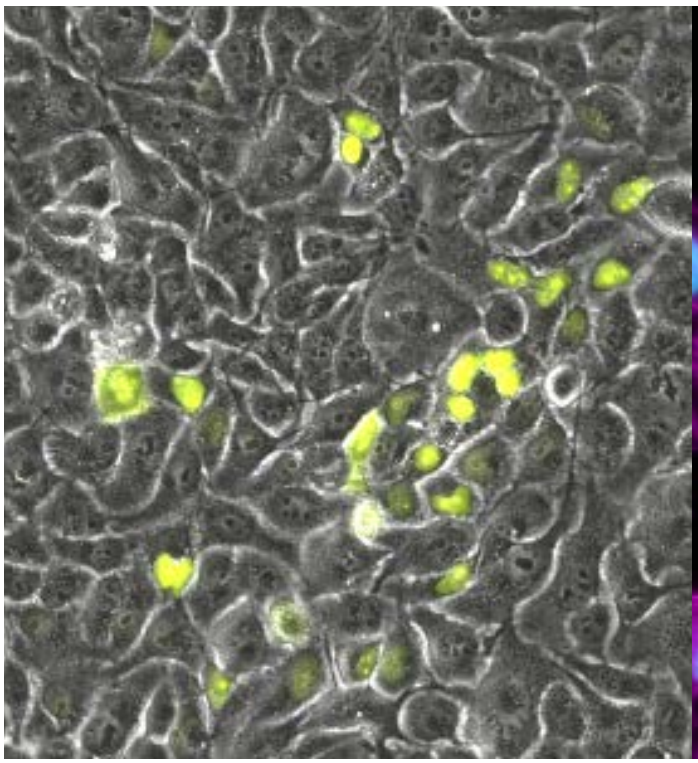
High-Quality Fluorescence Images within Reach



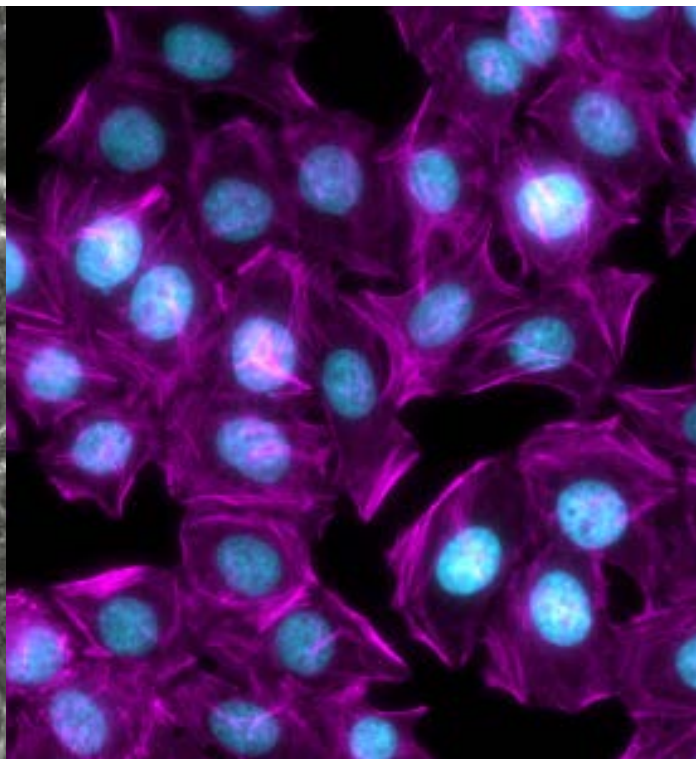
Not for clinical diagnostic use.

Premium Image Quality in a Cost-Effective Camera

Take advantage of premium technology at a reasonable cost with the DP23M monochrome digital microscope camera. The camera makes it simple to quickly obtain high-quality fluorescence images required for sample inspection and routine fluorescence imaging. In addition to fluorescence imaging, the DP23M camera can be used to image a wide range of contrasting techniques, including phase contrast, inversion contrast, and differential interference contrast.



HeLa cells expressing YFP in cell nuclei



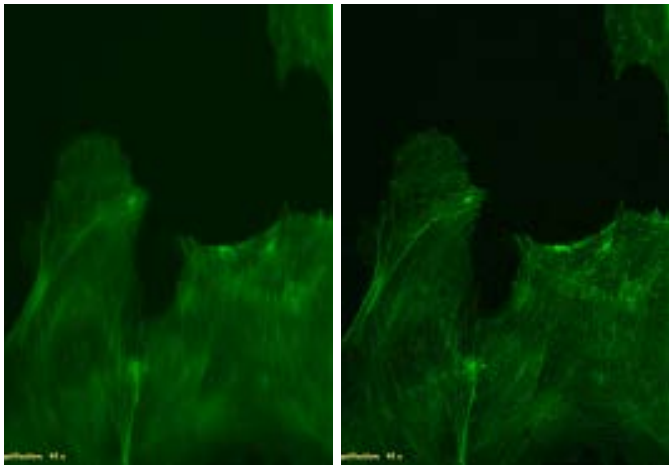
HeLa cells: cyan: DAPI, cell nuclei, magenta: Cy5, actin filaments.

Sensitivity, Resolution, and Speed for Fluorescence Imaging

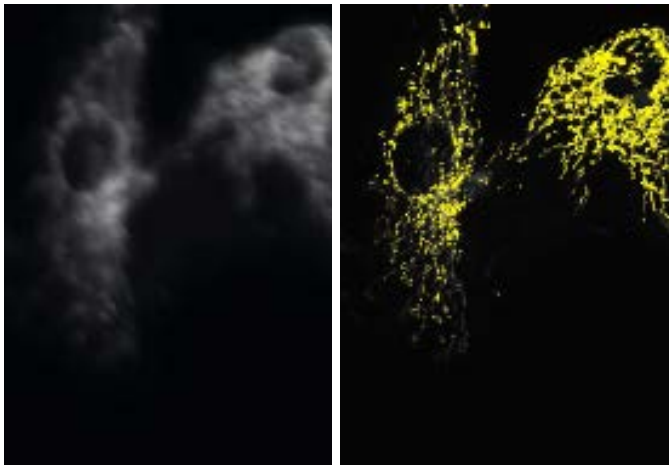
The camera's sensitivity and resolution deliver bright fluorescence images. Capturing fluorescence images with a high signal-to-noise ratio is simple thanks to a backside illuminated monochrome CMOS sensor with 2 × 2 binning and Olympus Smart Image Averaging, which reduces noise to make small and subtle details visible. Capture high-resolution phase contrast/DIC images thanks to the camera's 6.4-megapixel resolution in combination with fast frame rates of up to 60 frames per second (fps). With a broad 400 nm to 1000 nm spectral range, you can image your samples using popular near-infrared dyes with reduced endogenous sample background fluorescence.

Simplified Support—Camera, Software, and Hardware from Olympus

Combine the DP23M camera with a CKX53 microscope and cellSens imaging software for an easy-to-use solution for routine cell culture monitoring and expression checks. Weak fluorescence signals from a range of dyes can be viewed clearly thanks to the camera's advanced technology and use of the same high-performance filter cubes found on Olympus microscopes. As a fully integrated solution from Olympus, support is just a call away.



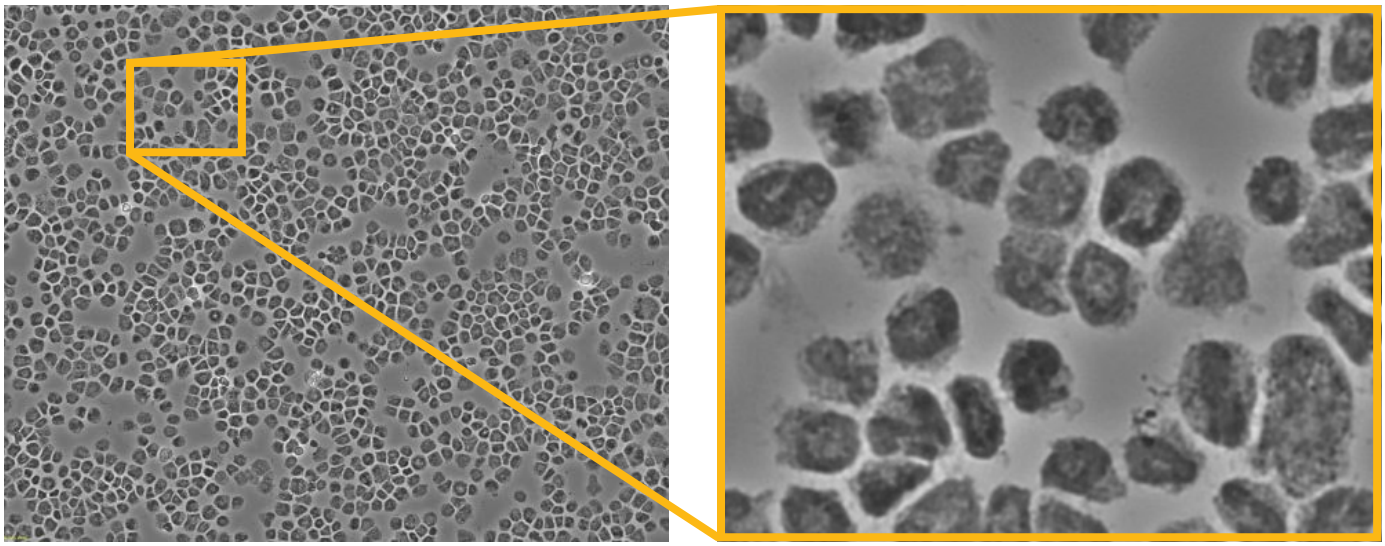
Left: Fast Live off, Right: Fast Live on



Left: Focus Peaking off, Right: Focus Peaking on (yellow highlighting indicates the pixels in focus)

Quickly find areas of interest: the images remain clear while you're moving the sample—even at long exposure times—thanks to the camera's fast live function, so you don't have to wait for the camera to refresh.

Fast, responsive imaging: the focus peaking function can help you determine and adjust the critical focus quickly. The fast focus also helps reduce phototoxicity or bleaching by exposing your sample only as long as needed.



Observe multiple cells at once: when used with low magnification objectives, the camera's high resolution and advanced sharpness filter enable you to see fine details over a wide field of view so that you can observe multiple cells at the same time.

Simple to Set Up and Use

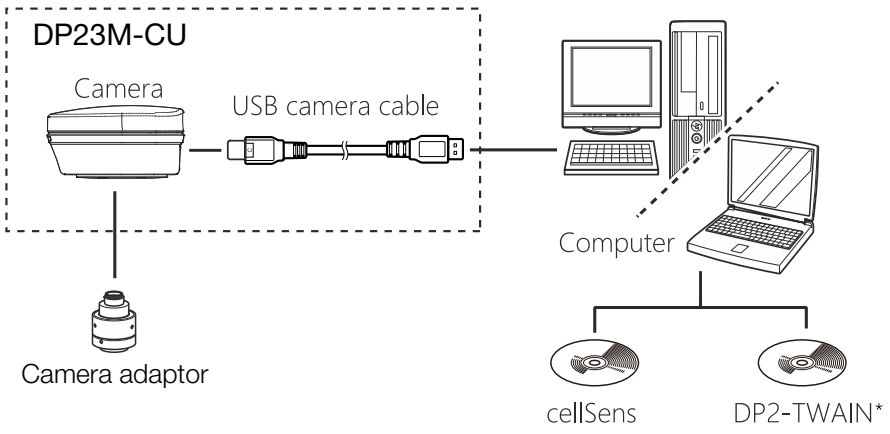
The DP23M microscope camera uses passive cooling and a single cable connection (USB 3.1) for power and data transfer, making it compact and easy to set up. Install your camera and get to work fast thanks to the simple plug and play design. With seamless integration into Olympus cellSens software, images can be acquired simply and intuitively. The optional cellSens software solutions like Count and Measure and TruAI technology help you to get reliable quantitative data easily and quickly.

DP23M Specifications

Image Sensor	Backside illuminated monochrome CMOS
Sensor Size	1/1.8 inch (7.41 mm × 4.98 mm)
Resolution (max)	3088 × 2076 pixels 2072 × 2072 pixels (Square) 1920 × 1080 pixels (Full HD 16:9) 1544 × 1038 pixels (Binning 2 × 2)
Pixel Size	2.4 × 2.4 µm
Binning	2 × 2
A/D Converter (Bit Depth)	10 bit
Exposure Time	From 13 µs to 25 s
Live Frame Rates*	Up to 45 fps at 3088 × 2076 pixels Up to 58 fps at 2072 × 2072 pixels (Square) Up to 60 fps at 1920 × 1080 pixels (Full HD 16:9) Up to 58 fps at 1544 × 1038 pixels (Binning 2 × 2)
Cooling System	Passively cooled
Data Transfer	USB 3.1 Gen 1
Time-Saving Features	Olympus Smart Image Averaging (OSIA) (active noise reduction) Fast Live (fast live image in low light conditions) Focus peaking (visual assistant for manual focus) Hot pixel calibration Sharpness filter
Compatible PC Specifications	CPU: Intel® Xeon, Intel® Core i5, i7, i9, or the equivalent RAM: 8 GB Recommended: • 6 or more physical CPU cores • 16 GB RAM (dual channel)
Operating System	Windows 10 64-bit
Imaging Platform	cellSens Entry, Standard, and Dimension, v. 3.2 or higher**; service update for v. 3.2. required
Dimension (W × D × H)	76.7 mm × 70.1 mm × 37.3 mm (3 in. × 2.8 in. × 1.5 in.)
Weight	Approx. 380 g (0.84 lb)
Mount	C-mount

*Frame rate may decrease depending on the condition of your PC, monitor resolution, and/or software.
**cellSens software is not for clinical diagnostic use.

DP23M PC Configuration System Diagram



*provided only by downloading from website

Images title page

Left: Macrophage expression F4/80 (Mature murine macrophage marker)
Blue: DAPI, cell nuclei, Red: Cy7, Macrophage
Middle: HeLa cells expressing GFP in cytoplasm
Right: Blue: cell nuclei, Green: actin filaments, Red: mitochondira, Bovine pulmonary artery endothelial cells (BPAE)

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