

### **UltraMicroscope Platform**

Light sheet microscopy made fast and easy



# Seeing nature's complexity in a new dimension

The UltraMicroscope Platform consists of two intuitive yet powerful solutions for high-resolution three-dimensional (3D) imaging of multiple and large cleared samples: the UltraMicroscope Blaze™ and UltraMicroscope Choros™ Light Sheet Imaging Systems. With the revolutionary LightSpeed Mode and the MACS® iQ View − 3D Large Volume software, the two systems set new benchmarks for high-quality, fast 3D imaging.

### Explore the full range of your sample

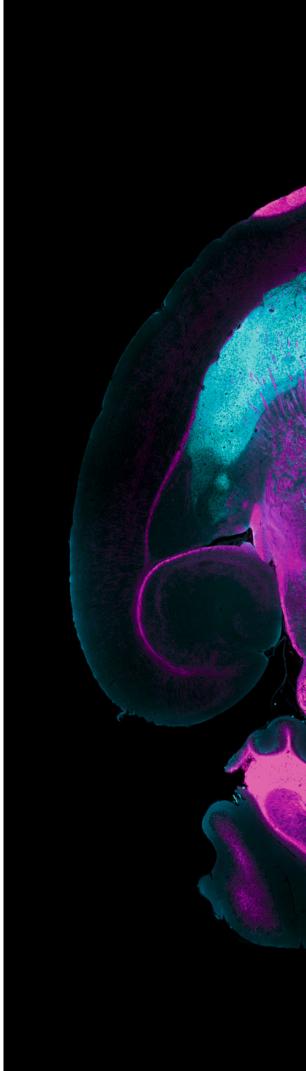
The high resolution and large imaging range of the UltraMicroscope Blaze empowers you to explore every perspective of your samples, from overview down to the subcellular level. Sample sizes range from as small as organoids to as large as entire and multiple mouse organs. The UltraMicroscope Choros expands your imaging volume to the largest possible on an UltraMicroscope. You can easily image entire cleared mice and even human organs, without sacrificing sample size or resolution.

### Faster than ever, precise as always

The LightSpeed Mode unlocks unprecedented imaging speed while preserving the renowned resolution power of the UltraMicroscope Platform. Capturing an entire mouse brain takes under three minutes, instead of the hours needed by other light sheet microscopes. Batch imaging with the MACS UltraMount workflows multiplies that process into rapid, high-throughput analyses with minimal hands-on time.

### 3D imaging for everyone

The innovative design of our UltraMicroscope Platform transforms even novices into power-users of light sheet microscopy. Intuitive software, automated features, and comprehensive workflows make 3D imaging an easily deployed and integral tool of any research laboratory.





## All you need for light sheet microscopy – from sample preparation to data optimization

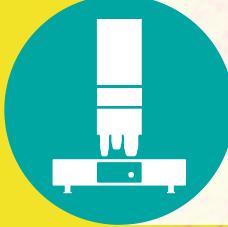
Embark on a high-performance light sheet microscopy journey with minimal effort and maximum power. The UltraMicroscope Platform is a comprehensive workflow solution that includes validated 3D-immunofluorescence (3D-IF) antibodies to stain large tissue samples, ready-to-use reagent kits to efficiently clear them, two market-leading light

sheet microscopes to quickly image them in 3D, and dedicated image processing software to optimally visualize the output. We use the UltraMicroscope Platform in our own research. Thus, we understand your needs and support both technical and biological aspects to make the most of your samples.



### Validated 3D-IF antibodies

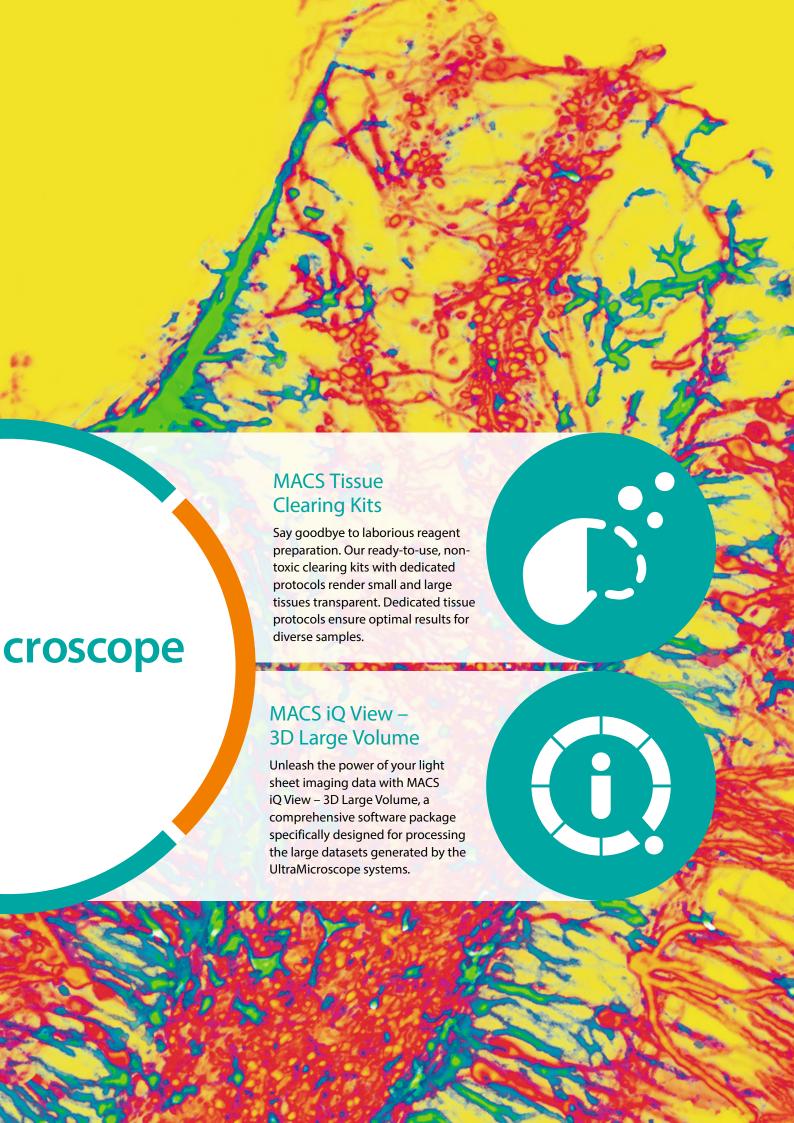
Skip the time-consuming process of screening and testing antibodies. Use our validated 3D-IF antibodies, optimized for whole-mount staining of large cleared samples.



### UltraMicroscope Instruments

Enjoy the ease of fast light sheet imaging with the fully automated UltraMicroscope Blaze or push the limit of large-volume 3D imaging with the UltraMicroscope Choros.

**UltraMi** Platform



## Setting the benchmark with cutting-edge technology

The UltraMicroscope pioneered commercial light sheet microscopy, contributing to more scientific publications than any other system in its category. This legacy continues with the UltraMicroscope Blaze,

born from decades of customer feedback and setting the benchmark with cutting-edge technology. Stay at the forefront of discovery with this powerful tool.

### Autofocus, motorized turret, and automatic post-magnifier

Reduce hands-on time via several automated functions. Switch automatically between objective lenses and keep your samples sharp – from overview scans to single cell imaging.



### LightSpeed Mode

Experience unparalleled image quality at speeds that surpass all other systems in the market. LightSpeed Mode and batch imaging take high-throughput 3D imaging to a whole new level.



### Light sheet and detection optics

Illuminate all areas of your sample and minimize shadows with bilateral, triple illumination.
Collect the most out of your sample with dedicated long WD, high NA objective lenses.

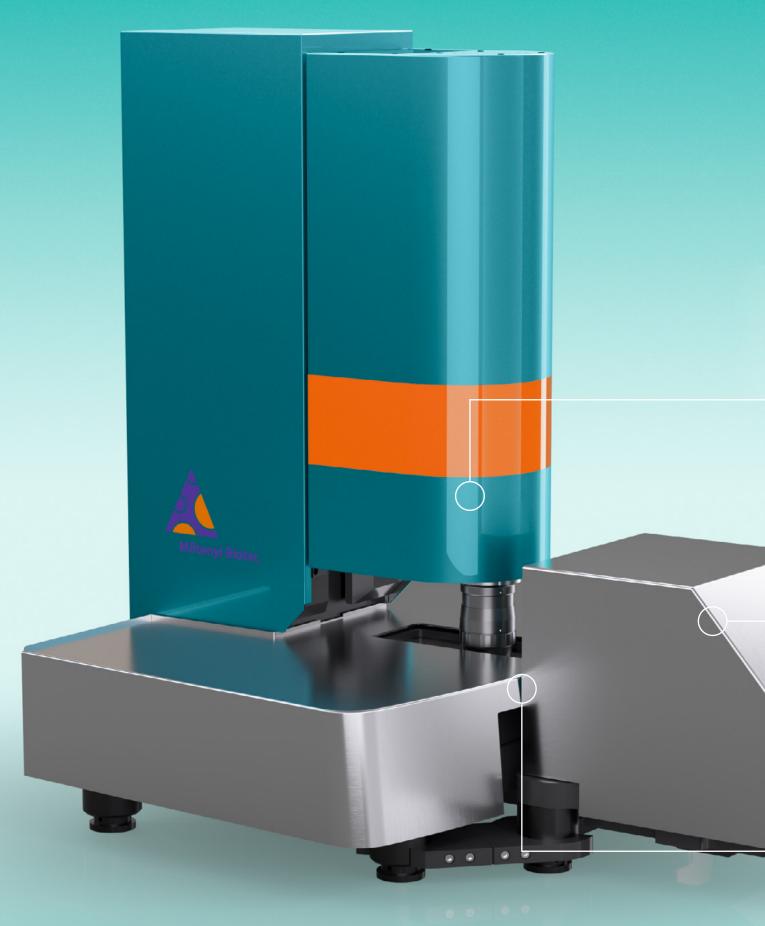


### Large sample chambers and automated sample release

Analyze a variety of cleared specimens with ease. Choose between our standard and XXL chambers and use the automated sample release function to load and exchange samples between experiments. Our temperature-controlled cuvette accommodates applications, like *in vivo* imaging, that require specific and stable environmental conditions.







### See more, discover more

Push the boundaries of large-sample 3D imaging. Featuring a dedicated standalone stage, the UltraMicroscope Choros delivers the same performance and ease-of-use as the UltraMicroscope Blaze, but with double the imaging volume. Effortlessly image whole cleared mice and entire human organs or biopsy tissues without sectioning or trimming precious samples to fit into the imaging cuvette.



### Light sheet and detection optics

Harmonized illumination and detection features across the UltraMicroscope Platform allow imaging larger-than-ever samples at cell-level resolution. Instead of an automated objective revolver, the UltraMicroscope Choros houses single objectives that are easily exchanged and automatically recognized by an innovative quick-release mechanism.



### Extended travel range

An external standalone stage at the front of the instrument greatly expands imaging volume. Despite its extended range, the stage is sturdy, precise, and compatible with the LightSpeed Mode. The result is rapid 3D imaging of very large or multiple cleared samples.





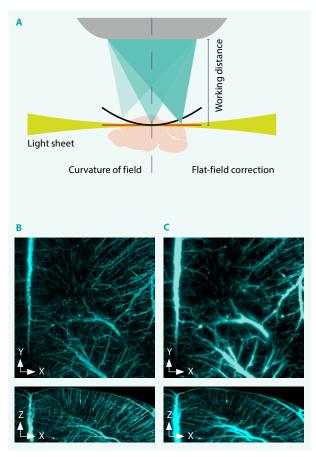
### The largest imaging cuvette

Very large specimens need room. The UltraMicroscope Choros is equipped with a unique cuvette featuring a total capacity of 1.5 L. That volume is twice the space of the standard cuvette on the UltraMicroscope Blaze.

### **Next-level light sheet microscopy**

### Always sharp with Multi-Immersion (MI) Plan objectives

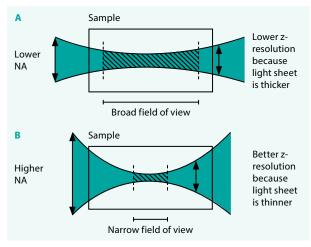
Objective lenses can produce artifacts that worsen with a broader field of view (FOV). MI Plan objectives, in contrast, generate images that are in focus throughout the area of interest. Designed and optimized for high-resolution light sheet imaging, this objective series combines flat-field correction (fig. 1A), high numerical aperture (NA), and long working distances to image large samples accurately. Moreover, they are compatible with various dipping caps that allow distortion-free imaging in all clearing solutions (fig. 1B and C), whether aqueous or organic-based (refractive indices between 1.33 and 1.56).



**Figure 1:** MI Plan objectives feature flat-field correction that sharpens focus throughout large areas of interest (A) and are compatible with various dipping caps. Images of a whole mouse brain stained for vasculature show the improved image quality achieved using a dipping cap for organic media (B) compared to none (C). Imaged in MACS Imaging Solution on the UltraMicroscope Blaze with MI Plan 4× objective.

### Light sheet technology tailored to your sample

The light sheet, thinnest within a specific horizontal range, is crucial for fluorescence detection. Tailored to match sample size and desired FOV, the light sheet parameters of both UltraMicroscope Instruments can be adjusted for optimal illumination (fig. 2). Additionally, their optics ensure accurate localization and high-quality images under any conditions via automated multichannel autofocus and automatic correction of chromatic shifts in the light sheet focus (fig. 3).

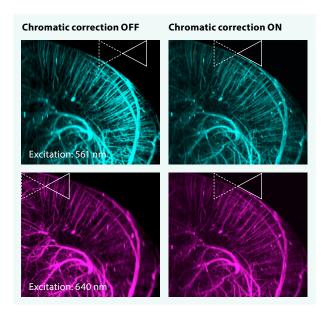


**Figure 2:** Adjustable light sheet shape meets different imaging needs. A low numerical aperture (NA) provides a broad FOV but low z-resolution for large samples (A). A high NA offers high z-resolution and a narrow FOV for small samples (B). Dynamic Focus automatically merges a series of high-NA images to achieve both high z-resolution and a broad FOV

### Acquisition in record time

Common trade-offs in microscopy, like sacrificing image quality for speed, vanish with the LightSpeed Mode of the UltraMicroscope Platform. Instead of moving the imaging optics and detector to acquire images, LightSpeed Mode minimizes downtime by synchronizing the camera with the stage motion for continuous image acquisition. As a result, imaging is up to 60-fold faster than the standard Dynamic Focus acquisition mode. Combined with batch imaging and the MACS UltraMount workflows, LightSpeed Mode sets new standards in high-throughput 3D imaging.

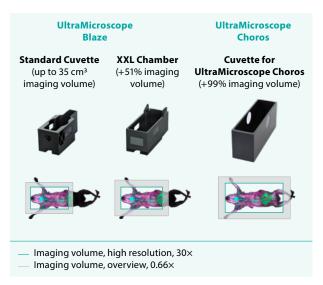




**Figure 3:** UltraMicroscope Instruments automatically correct chromatic shift (right), illustrated above by the changed position of the Rayleigh length in the x-plane (left). Imaging parameters: Whole mouse brain; UltraMicroscope Blaze with MI Plan 4× objective.

### Mesoscopic 3D imaging

Three chambers grant flexible imaging of different sized samples. The Standard Cuvette and XXL Chamber of the UltraMicroscope Blaze offer space for multiple rodent organs or organoids and up to a whole cleared mouse (fig. 4). The Ultramicroscope Choros expands that imaging volume with its dedicated cuvette, accommodating a whole cleared mouse or human organs even at 30× magnification.



**Figure 4:** Dedicated sample chambers offer flexible volume options to image anything from multiple small samples to a whole cleared mouse or even human organs.

### The MACS UltraMount workflows

### Maximize throughput. Minimize effort.

MACS UltraMount multisample holders represent a unique workflow concept for 3D imaging. Each UltraMount workflow consists of an applicationinspired, high-throughput sample holder, a preconfigured measurement template for the acquisition software, and an application protocol for

specimen embedding and imaging setup. Filling aid tools as well as tissue staining and clearing protocols complete specific workflows. The concept is designed to augment imaging throughput with minimal manual intervention while ensuring the renowned cellular resolution of UltraMicroscope Instruments (fig. 5).

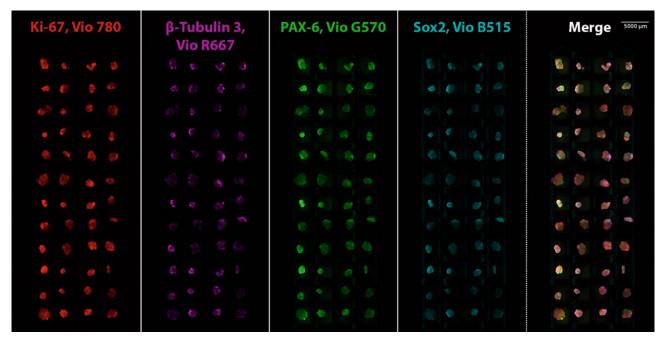


Figure 5: Brain organoids were imaged in just over one hour using the MACS UltraMount 48 and LightSpeed Mode on the UltraMicroscope Blaze. Imaging parameters:  $1 \times$  objective,  $10.1 \text{ cm}^3$  total volume,  $5.9 \times 5.9 \times 5.$ 





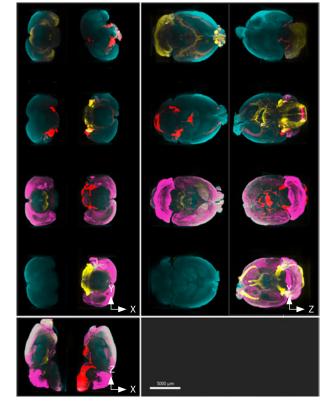
### **MACS UltraMount 48**

- Up to 48 organoids and/or spheroids.
- · Direct in-mount staining and clearing.
- Well size:  $3 \times 3 \times 3$  mm.



### **MACS UltraMount 8**

- Up to 8 cleared whole mouse brains (fig. 6).
- Robust clamping for different sized samples.
- Removable extension piece shields fluorescence bleed across sample rows.
- Well size: 8–10 mm wide, 7–14 mm high.



**Figure 6:** Mouse brains mounted on the UltraMount 8 were prepared with the MACS Deep Clearing Kit to visualize calretinin, NeuN, CD31, neurofilament, tyrosine hydroxylase, MBP, and parvalbumin. Imaging parameters: staining with Vio Dyes G570, R667, and 780; acquisition on the UltraMicroscope Blaze.



### MACS UltraMount 12 and UltraMount 24

- Up to 12 or 24 cleared specimens.
- Suitable for xenografts, single mouse organs, or small model organisms to be imaged sequentially.
- MACS UltraMount 24 fits in the XXL Chamber.
- Well size:  $7 \times 7 \times 5$  mm.



### **LEARN MORE**

See eight whole mouse brains in spectacular detail with the MACS UltraMount 8 Sample Holder.

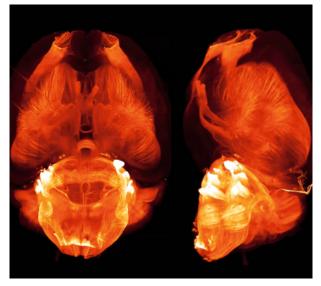
miltenyibiotec.com/ MACS-UltraMount8

## Antibodies validated for 3D imaging of cleared tissues



A significant bottleneck in analyzing large cleared samples is finding the right antibodies for your target

structures. Our antibodies for 3D-immunofluorescence (3D-IF) are the key to exceptional imaging results.



**Figure 7:** 3D-IF antibodies are compatible with other clearing methods. Mouse brain cleared with iDISCO<sup>+</sup> and stained with Neurofilament Antibody, human/mouse, Vio R667, REAfinity. Data courtesy of Gubra, a CRO and Biotech company, Denmark.

### Clear signals by design

- Validated on tissues cleared with the MACS Clearing and Deep Clearing Kits.
- As fluorophore-conjugated primary antibodies, they stain 50% faster than indirect immunostaining methods.
- Compatible with other clearing methods like iDISCO+ (fig. 7).
- Optimal signal-to-background ratios with bright and photostable Vio Dyes.
- Engineered for reproducible results and minimal background signal.





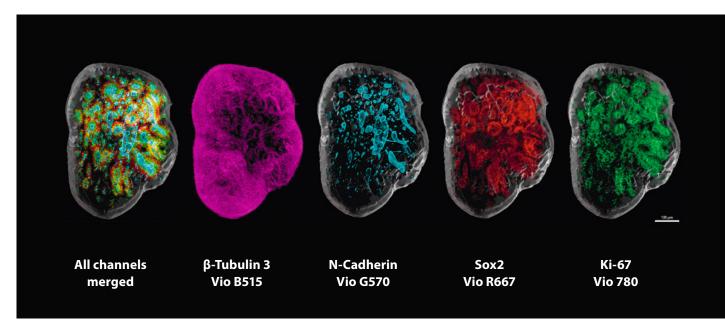
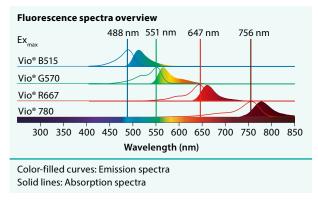


Figure 8: A human cerebral organoid cleared with the MACS Clearing Kit and labeled in 4 channels using 3D-IF antibodies.

### Robust and bright labeling

Our 3D-IF validated antibodies are conjugated to Vio Dyes. Known for their brightness, Vio Dyes are highly photostable and generate excellent signal-to-background ratios. Staining in 4 channels (fig. 8) and 3 channels (fig. 9) benefits from fluorophores that are comparable in many characteristics to commonly used Alexa Fluor® dyes (fig. 10) and robustly withstand the laser/filter combinations widely used in 3D imaging.



**Figure 10:** The excitation (empty curve) and emission (filled curve) spectra of Vio Dyes. Their respective excitation maxima ( $Ex_{max}$ ) align with those of commonly used Alexa Fluor dyes.

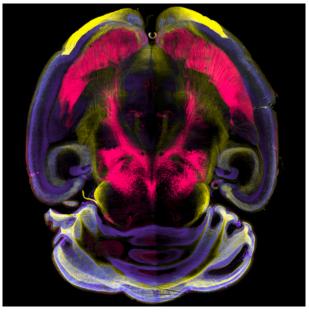
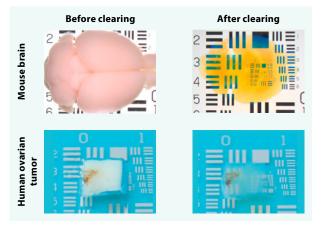


Figure 9: A whole mouse brain cleared with the MACS Deep Clearing Kit and immunostained with Tyrosine Hydroxylase Antibody, Vio G570 (magenta), NeuN Antibody, Vio R667 (purple), and Neurofilament Antibody, Vio 780 (yellow). Image acquired on the UltraMicroscope Blaze Instrument.

## Streamlined tissue clearing to get started immediately



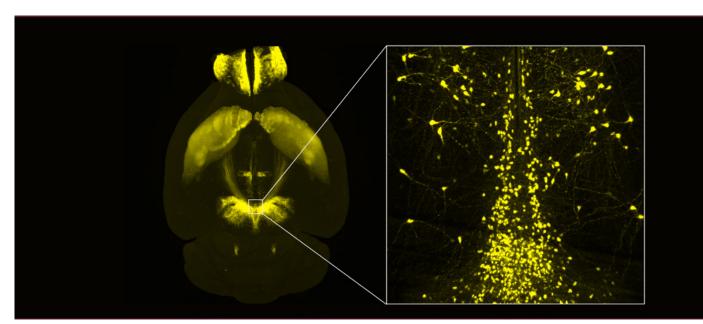


**Figure 11:** The MACS Deep Clearing Kit (top row) and MACS Clearing Kit (bottom row) generate clear and translucent samples with non-toxic and gentle reagents that preserve tissue morphology.

### From opacity to clarity

Biological matter scatters and absorbs light, making tissues naturally opaque. Optical tissue clearing enables the detailed 3D visualization of underlying structures. However, selecting the right clearing method is challenging. Common techniques are time-consuming, complex, tailored for specific tissue types or staining approaches, and may rely on harmful chemicals. The MACS Clearing and Deep Clearing Kits address these issues, producing enhanced transparency in diverse samples, from organoids to whole mouse brains (fig. 11).

- Fast and efficient organic solvent-based clearing
- Easy-to-follow protocols
- A non-toxic and user-friendly clearing method



**Figure 12:** MACS Deep Clearing Kit facilitates clear immunolabeling signals with minimum background. A magnified area selection of a whole mouse brain labeled with Tyrosine Hydroxylase Antibody, anti-human/mouse/rat, Vio G570, shows clearly labeled individual cells.

Sample type	MACS Deep Clearing Kit Optimized tissue clearing and sample preparation for large tissues (fig. 12)	MACS Clearing Kit Robust tissue clearing and sample preparation for a broad range of tissues
Whole mouse brain	•	Not applicable
Mouse brain hemisphere	•	•
Mouse brain hemisphere preserving endogenous protein signals	•	•
Mouse lung and intestine	Coming soon	•
Human tumors and xenografts (blood-rich)	•	•
Mouse liver, spleen, kidney, embryo, heart	Coming soon	•
Organoid and spheroid	•	•
Organoid and spheroid (high-throughput)	•	•
Mouse lymph node	•	•



## MACS iQ View – 3D Large Volume: Unlock the full potential of your data

MACS iQ View – 3D Large Volume is an all-inclusive and user-friendly solution to process images captured on the UltraMicroscope Platform.

### Intuitive and streamlined use

The software uniquely integrates various processing algorithms (3D Crop, Destripe, Denoise, Deconvolution, Stitching, and Contrast Compression) into a unified workflow, making image processing straightforward and efficient (fig. 13).

### Stitching in just one click

The stitching algorithm is a one-click solution. The 3D mosaic stacks are seamlessly stitched together without the need for any manual intervention.

### Tailored deconvolution

Deconvolution matches the optical parameters of your UltraMicroscope Instrument, enhancing image quality and revealing hidden details.

### Side-by-side view

Users view unprocessed and processed data side by side, allowing them to experiment with different settings and algorithm combinations to find the best fit for their data.

### Batch image processing

Users can queue and initiate various workflows across multiple datasets. This feature ensures smooth processing of extensive datasets and multiple samples on the UltraMicroscope Platform, particularly in the LightSpeed Mode.



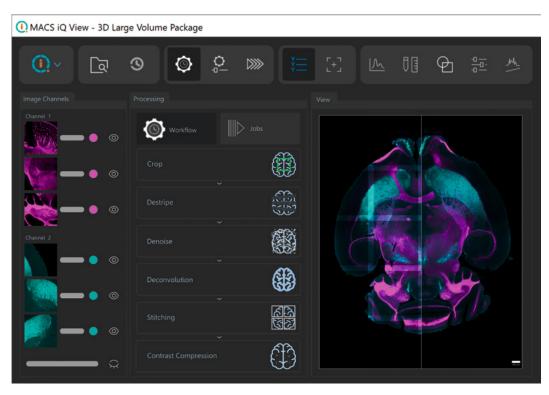
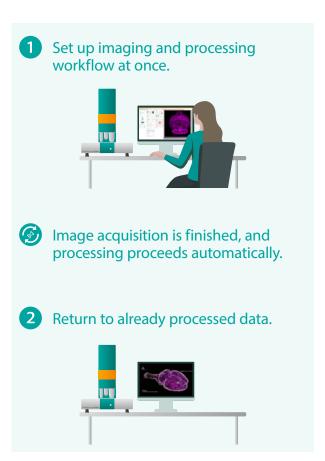


Figure 13: The all-rounder MACS iQ View – 3D Large Volume software places powerful processing algorithms at your fingertips.

### Automation from image acquisition to processing

MACS iQ View – 3D Large Volume interfaces with the UltraMicroscope Platform acquisition software, ImSpector. Once connected, you can schedule individual processing steps or custom workflows and assign them directly to measurements as you set up your imaging experiment in ImSpector. After acquisition, your processing steps begin automatically in MACS iQ View – 3D Large Volume, eliminating the need to return to your computer.

The workflow approach is further enhanced with our Graphical Workstation for UltraMicroscope Instruments, a high-end system designed for data analysis and mid-term storage. A 10-Gb LAN connection between the acquisition computer and the Graphical Workstation ensures direct, high-speed data transfer. Acquired data can be saved and processed directly on the Graphical Workstation without the need for data transfers.

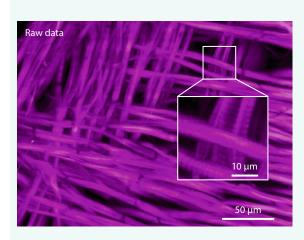


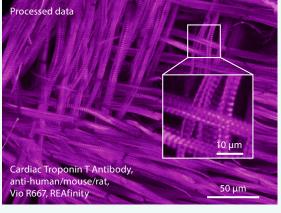
### Various output formats

The data from image processing is output in the widely compatible OME-TIFF format, ensuring seamless integration with a variety of imaging analysis software. Image snapshots can be exported in standard formats like TIFF, PNG, and JPEG, or data can be directly converted into a format optimized for 3D visualization.

### Application of Destripe and Deconvolution

Rat heart tissue cleared with the MACS Deep Clearing Kit and labeled with Cardiac Troponin T Antibody, Vio R667, REAfinity. Destripe processing removed striping artifacts and Deconvolution enhanced the resolution. Precise spatial data like fiber diameter and volume can be extracted from the processed image.





Images generated with funding from BMFTR (grant 01EK2108C).

## Mapping biology in 3D: Applications of the UltraMicroscope Platform

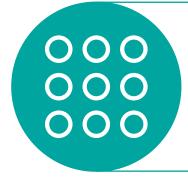
Light sheet microscopy of cleared tissues provides unique insights into complex biological structures. Enabling the imaging of very large cleared samples and high-throughput analysis of smaller specimens, the UltraMicroscope Platform is an essential tool for all researchers – from those examining fundamental biological questions to those looking to improve drug candidate identification and enhance therapeutic development with clearer, more accurate insights.



### Imaging whole organ and animal models

Gain a 3D view of biological processes and disease progression in intact human organs or whole mouse models. The detailed visualization of cancer metastasis, biomolecule distribution, or any cellular target of interest within a large specimen requires no dissection or sectioning.





### High-throughput 3D imaging

Overcome throughput limitations. The MACS UltraMount workflows image organoids, xenografts, or whole mouse brains in large batches. Matched preconfigured templates and the interface with MACS iQ View 3D for image processing streamline your workflow, minimizing manual steps and allowing you to focus on results that cut costs and time.





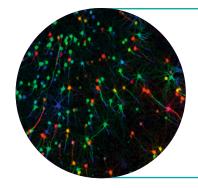
### 3D imaging with multiplex analysis

Specimens are precious. Then why risk wasting them? Inform spatial biology workflows with light sheet–guided multiplexing. Acquire a full 3D view of your starting tissue, identify regions of interest, and only then section the specimen for downstream spatial biology pipelines.



## Revolutionizing research in neuroscience, immuno-oncology, and beyond

Used across diverse fields, the UltraMicroscope Platform has contributed to over 1000 publications, attesting to its excellence in generating valuable research data. Dive into intricate neuron connections, map Alzheimer's pathology in stunning detail, spot individual cancer cells, or unlock the mysteries of embryology – all just a glimpse of the UltraMicroscope Platform's potential. Explore a universe of possibilities. Start your journey here:



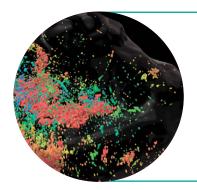
### A 3D atlas of the developing human head

Unlock the secrets of developmental biology with the UltraMicroscope Blaze. This study delves deep into the wonders of embryology, showcasing the fascinating development of the human head.

Read the full article in Cell.

► cell.com/cell/fulltext/S0092-8674(23)01230-8





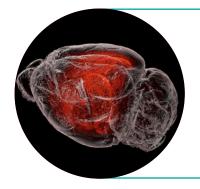
### A multimodal imaging workflow for monitoring CAR T cell therapy against solid tumors

Use 3D imaging in combination with spatial high-plex protein analysis to assess intratumoral therapeutic cell distribution.

Read the full article in Theranostics.

► thno.org/v12p4834.pdf





### Spatial transcriptomics in 3D intact specimens

Kanatani *et al.* developed TRISCO, a clearing technique that enables 3D *in situ* hybridization across the entire mouse brain. Light sheet microscopy was then used to visualize whole-brain spatial distribution of mRNA at cellular resolution.

Read the full article in Science.

► science.org/doi/10.1126/science.adn9947





Explore over 1000 publications featuring the UltraMicroscope.

Whole brain image courtesy of Yue Li and Shigeaki Kanatani, Karolinska Institute.

### **Specifications**

	UltraMicroscope Blaze	UltraMicroscope Choros
Sheet optics		
Illumination	Uni- and bidirectional	Uni- and bidirectional
Number of light sheets	1–6	1–6
Thickness	4–24 μm	4–24 μm
Width	1–20 mm	1–20 mm
Numerical aperture	0.0135-0.135	0.0135–0.135
Focus positioning	Dynamic	Dynamic
Refractive index (RI) compensation	Software-controlled automated RI compensation over the range of 1.33–1.56, covering all clearing media	Software-controlled automated RI compensation over the range of 1.33–1.56, covering all clearing media
Light sources		
Laser BC	Max. 5 laser lines (405, 488, 561, 639, 785 nm)*, 75–150 mW per diode	5 laser lines (405, 488, 561, 639, 785 nm)*, 75–150 mW per diode
Supercontinuum WLL	405–850 nm spectral range, 1–4 mW/nm	405–850 nm spectral range, 1–4 mW/nm
<b>Detection optics</b>		
Objective lenses	1.1×   4×   12×	1.1×   4×   12×
Total magnification	0.66-2.75×   2.4-10×   7.2-30×	0.66-2.75×   2.4-10×   7.2-30×
Numerical aperture	0.1   0.35   0.53	0.1   0.35   0.53
Max. theoretical resolution at detector	4.8 μm   1.3 μm   0.5 μm	4.8 μm   1.3 μm   0.5 μm
Working distance	≤17 mm   ≤16 mm   ≤10.9 mm	≤17 mm   ≤16 mm   ≤10.9 mm
FOV diagonal	6.8–29 mm   1.9–7.8 mm   0.63–2.6 mm	6.8–29 mm   1.9–7.8 mm   0.63–2.6 mm
Emission filters	Seven filters Ø 43 mm	Seven filters Ø 43 mm
Chromatic correction	Dynamic 400–850 nm	Dynamic 400–850 nm
Focusing	Software-controlled autofocus	Software-controlled autofocus
Objective change	Motorized turret allows automated change of objective lenses.	Manual objective exchange.
Magnification change	Software-controlled automated magnification changer for all objective lenses	Software-controlled automated magnification changer for all objective lenses
Camera specifications		
Detector	4.2 Megapixel sCMOS camera	4.2 Megapixel sCMOS camera
Active pixels (w × h)	2048 × 2048	2048 × 2048
Pixel size	6.5 μm × 6.5 μm	6.5 μm × 6.5 μm
Sensor size	13.3 mm × 13.3 mm; 18.8 mm diagonal	13.3 mm × 13.3 mm; 18.8 mm diagonal
Readout noise	0.8 med e⁻	0.8 med e⁻
Maximal frame rates	100 fps	100 fps
Maximum quantum efficiency	82%	82%
Sample chamber		
Chamber name	Cuvette for UltraMicroscope Blaze (standard sample chamber)   XXL chamber for UltraMicroscope Blaze	Cuvette for UltraMicroscope Choros
Capacity	497 mL   715 mL	1500 mL
Inner dimensions (w $\times$ d $\times$ h)	5.0 cm × 18.3 cm × 6.4 cm   7.1 cm × 20.0 cm × 6.4 cm	7.1 cm × 25.0 cm × 8 cm
Max. imaging range (x, y, z)	3.5 cm, 5.8 cm, 1.7 cm   4.4 cm, 7.0 cm, 1.7 cm	4.5 cm, 9.0 cm, 1.7 cm
Max. imaging volume	35 cm <sup>3</sup>   53 cm <sup>3</sup> (+51%)	69 cm <sup>3</sup>

	UltraMicroscope Blaze	UltraMicroscope Choros
Imaging solution	Aqueous buffers and organic solvents	Aqueous buffers and organic solvents
Batch imaging mode	Multiple samples can be imaged in one session	Multiple samples can be imaged in one session
Refractive index compatibility	1.33-1.56	1.33-1.56
General information		
Dimensions (w×h×d)	67 cm × 91 cm × 52.5 cm	67 cm × 91 cm × 84 cm
Weight	98 kg (without controller and laser)	110 kg (without controller and laser)

<sup>\*</sup> Five out of eleven available laser lines can be chosen from the Beam Combiner.

### miltenyibiotec.com



### Miltenyi Biotec

#### Germany/Austria

Miltenyi Biotec B.V. & Co. KG Friedrich-Ebert-Straße 68 51429 Bergisch Gladbach Germany Phone +49 2204 8306-0 Fax +49 2204 85197 macsde@miltenyi.com

#### USA/Canada

Miltenyi Biotec North America, Inc. 1201 Clopper Road Gaithersburg, MD 20878, USA Phone 800 FOR MACS Phone +1 866 811 4466 Fax +1 877 591 1060 macsus@miltenyi.com

### Australia

Miltenyi Biotec Australia Pty. Ltd. Unit 11, 2 Eden Park Drive Macquarie Park, NSW 2113 Australia Phone +61 2 8877 7400 Fax +61 2 9889 5044 macsau@miltenyi.com

#### Benelux

Miltenyi Biotec B.V. Dellaertweg 9C 2316 WZ Leiden The Netherlands macsni@miltenyi.com

### Customer service for:

**The Netherlands** Phone 0800 4020120 Fax 0800 4020100

### Belgium

Phone 0800 94016 Fax 0800 99626 **Luxembourg** Phone 800 24971 Fax 800 24984

#### China

Miltenyi Biotec Technology & Trading (Shanghai) Co., Ltd. Room A401, 4/F No. 1077, Zhangheng Road Pudong New Area 201203 Shanghai, P.R. China Phone +86 21 6084 0210 Fax +86 21 6235 0953 macscn@miltenyi.com.cn

#### France

Miltenyi Biotec SAS 10 rue Mercoeur 75011 Paris, France Phone +33 1 56 98 16 16 macsfr@miltenyi.com

### Hong Kong

Miltenyi Biotec Hong Kong Ltd. Unit 301, Lakeside 1 No. 8 Science Park West Avenue Hong Kong Science Park Pak Shek Kok, New Territories Hong Kong Phone +852 3751 6698 Fax +852 3619 5772 macshk@miltenyi.com.hk

#### India

Miltenyi Biotec India Pvt. Ltd. Vatika Business Centre, Floor No. 6 Divya Sree Omega Kondapur, Serilingampally K.V. Rangareddy Telangana 500084, India Phone +91 040 45175910 macsin@miltenyi.com

#### Italy

Miltenyi Biotec S.r.l. Via Paolo Nanni Costa, 30 40133 Bologna, Italy Phone +39 051 6 460 491 Fax +39 051 6 460 499 macsit@miltenyi.com

#### Japar

Miltenyi Biotec K.K. NEX-Eitai Building 5F 16-10 Fuyuki, Koto-ku Tokyo 135-0041, Japan Phone +81 3 5646 8910 Fax +81 3 5646 8911 macsjp@miltenyi.com

#### **Nordics and Baltics**

Miltenyi Biotec Norden AB Medicon Village Scheeletorget 1 223 81 Lund, Sweden macsse@miltenyi.com Customer service for:

#### Sweden

Phone 0200 111 800 Fax +46 280 72 99 **Denmark** 

Phone 80 20 30 10 Fax +46 46 280 72 99 Norway, Finland, Iceland, and Baltic countries Phone +46 46 280 72 80 Fax +46 46 280 72 99

#### Singapore

Miltenyi Biotec Asia Pacific Pte Ltd.
438B Alexandra Road, Block B
Alexandra Technopark
#06-01
Singapore 119968
Phone +65 6238 8183
Fax +65 6238 0302
macssg@miltenyi.com

### South Korea

Miltenyi Biotec Korea Co., Ltd. Donggeuk 7F, 562 Nonhyeon-ro Gangnam-gu Seoul 06136, South Korea Phone +82 2 555 1988 Fax +82 2 555 8890 macskr@miltenyi.com

#### Spain

Miltenyi Biotec S.L.
C/Virgilio 2, Edificio II, Planta – 1
28223 Pozuelo de Alarcón
Madrid, Spain
Phone +34 91 512 12 90
Fax +34 91 512 12 91
macses@miltenyi.com

#### Switzerland

Miltenyi Biotec Swiss AG Soodstrasse 52 8134 Adliswil Switzerland Phone +41 32 623 08 47 Fax +49 2204 85197 macsch@miltenyi.com

### **United Kingdom**

Miltenyi Biotec Ltd. Almac House, Church Lane Bisley, Surrey GU24 9DR, UK Phone +44 1483 799 800 Fax +44 1483 799 811 macsuk@miltenyi.com

www.miltenyibiotec.com

Miltenyi Biotec provides products and services worldwide. Visit www.miltenyibiotec.com/local to find your nearest Miltenyi Biotec contact.

Unless otherwise specifically indicated, Miltenyi Biotec products and services are for research use only and not for therapeutic or diagnostic use. Blaze, Choros, MACS, the Miltenyi Biotec logo, REAfinity, and Vio are registered trademarks or trademarks of Miltenyi Biotec B.V. & Co. KG and/or its affiliates in various countries worldwide. All other trademarks mentioned in this document are the property of their respective owners and are used for identification purposes only. Copyright © 2025 Miltenyi Biotec and/or its affiliates. All rights reserved.