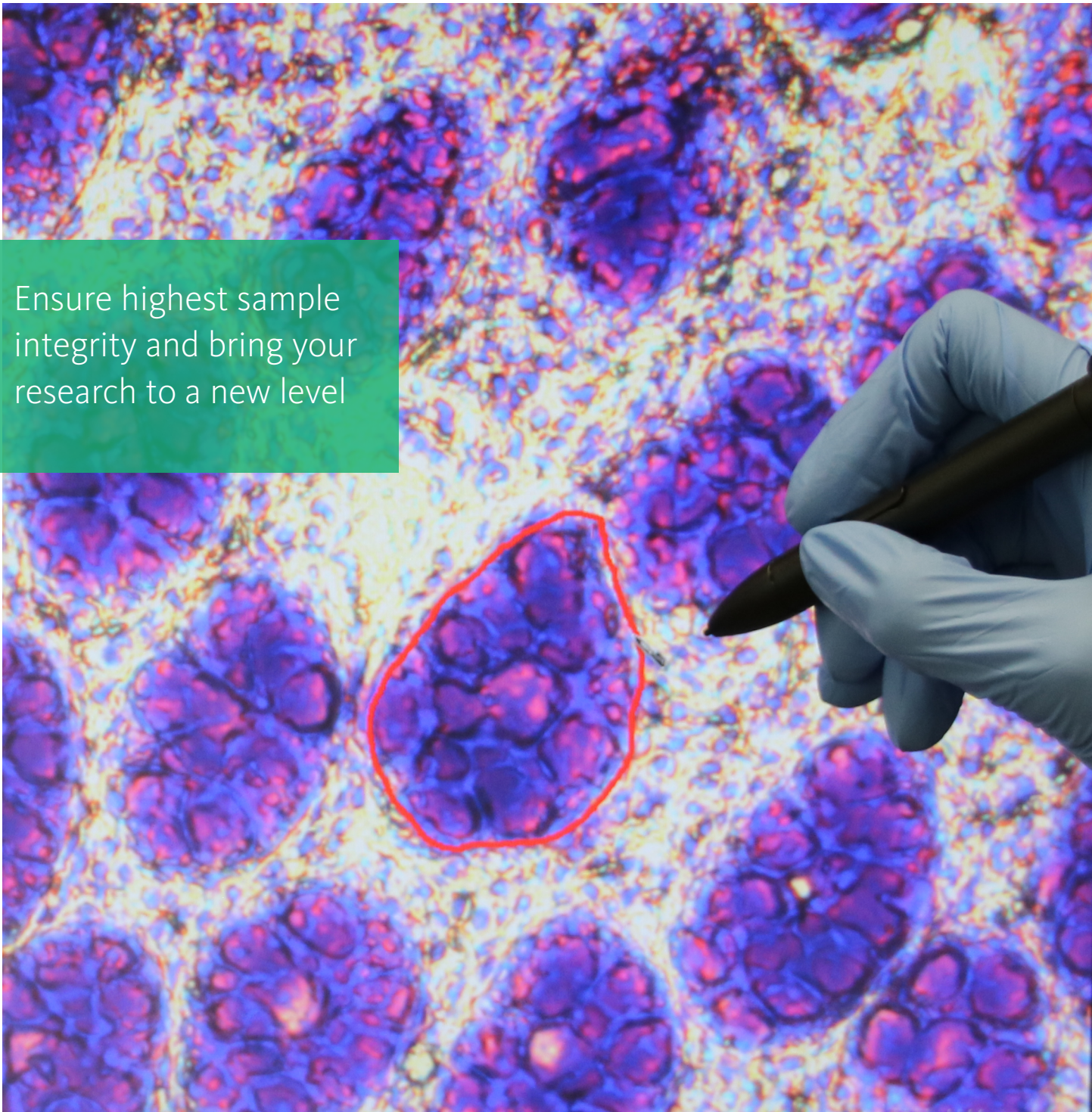


CellCut: The most gentle laser microdissection

Just Cut It!

Ensure highest sample integrity and bring your research to a new level



Dissection Perfection

Single cell isolation in combination with laser microdissection (LMD) is a technology for precision sample preparation. LMD is in many research areas the basic prerequisite for obtaining well-defined starting material for many downstream experiments.

Most precise and gentle laser microdissection

To assure meaningful data from a specific cell, precisely cut cell clusters, single cells or subcellular compartments, the MMI CellCut combines the most precise cutting performance and ensures outstanding sample integrity with the highest flexibility and ease of use. Bring your research to a new level!



The MMI CellCut on the Nikon Ti2-Eclipse inverted microscope. The system is compatible with many microscope brands and models.



Gentle to Cells

CellCut ensures highest sample integrity by sterile cutting and collection for highly efficient downstream applications



Check your Efficiency

In contrast to systems that use gravity for collection, CellCut enables a visual inspection and documentation of collected samples



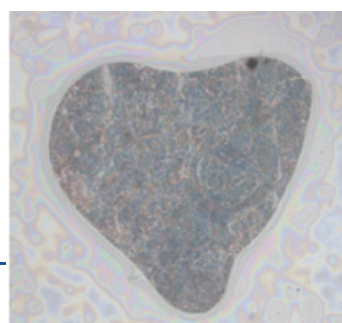
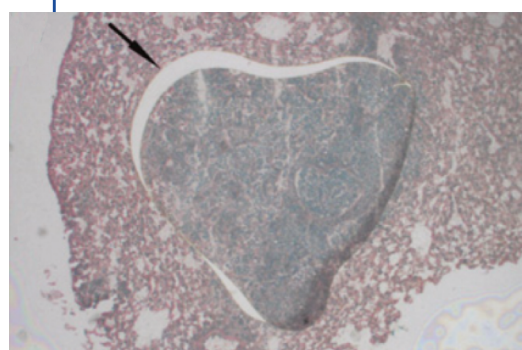
Contamination-Free Cutting

The sample is mounted between a glass slide and the carrier membrane. The sample itself is never exposed

Tumor Heterogeneity

Understanding tumor heterogeneity is one of the key goals in cancer research and oncology. Tumor tissue is a complex and heterogeneous structure consisting of different cell types which all contribute to the tumor mass as well as to the tumor microenvironment.

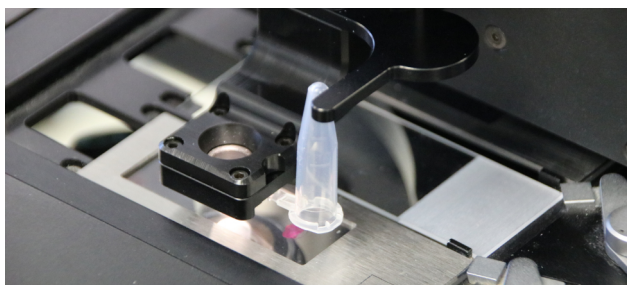
Laser microdissection with the MMI CellCut is a perfect tool to excise single tumor cells to investigate their mutational burden. Different staining technologies can help to identify tumor cells as well as different sub-clones within a heterogeneous tumor mass. This technology can be applied to any cancer type which displays tissue heterogeneity, such as breast cancer, lung cancer or prostate cancer.



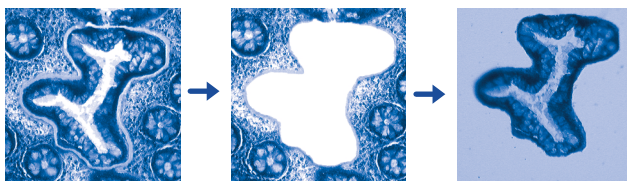
Documentation of lung metastasis removal from a mouse lung parenchyma by laser cutting with the CellCut. (Top) Dissecting screen view of lung metastasis with the laser cut path (arrow); (Below) Visual inspection of LCM target cutout on the collection cap.

Castro et al. 2016. PLoS One; 11(4):e0153270.

Positive Sample Inspection



The unique CapLift technology provides automated transfer of untainted targets into microtubes, which enables subsequent visual inspection.



Before Cutting

After Cutting

Inspection

From slide to tube: MMI CapLift technology

Automated transfer of untainted targets into microtubes from the entire microscope slide is provided by the unique CapLift technology. Your sample is therefore immediately ready for subsequent “downstream” molecular biological analysis.

Always check your cutting efficiency

Additionally, the MMI CapLift technology allows a full visual inspection of your sample during and after isolation. The orientation of the cell will be maintained, which allows you to easily verify the presence of the dissected area in the Isolation Cap. Furthermore, you can keep your sample in place during cutting to prevent single cells from flipping away. You will love this feature for your work on rare cells, and so will your reviewer!



Cut it All

You can cut almost any type of sample, such as fresh frozen tissue, FFPE material, plant tissue, smears, cytopins and living cells.



Keep it Flexible

CellCut is the most flexible microdissection system. Compatible with many microscopes and almost all objective lenses.



Become an Expert in 10 min

With the intuitive and flexible MMI CellTools analysis software, you simply select, cut and inspect your sample. Laser Microdissection was never so easy.



Isolation of HeLa cells using the MMI CellCut equipped with a climate chamber. No culture media has to be removed to ensure optimal re-culturing. *Selective Isolation of Living Cells for Re-cultivation, MMI Application Note.*

Living Cells

The separation and isolation of living cells is an essential prerequisite for homogenous cell culture populations. However, procedures to generate homogeneous cell cultures from selected cells are laborious and difficult to perform under physiological and sterile conditions. Cells are therefore less likely to grow and divide into new cells, and contamination risk makes these processes unreliable.

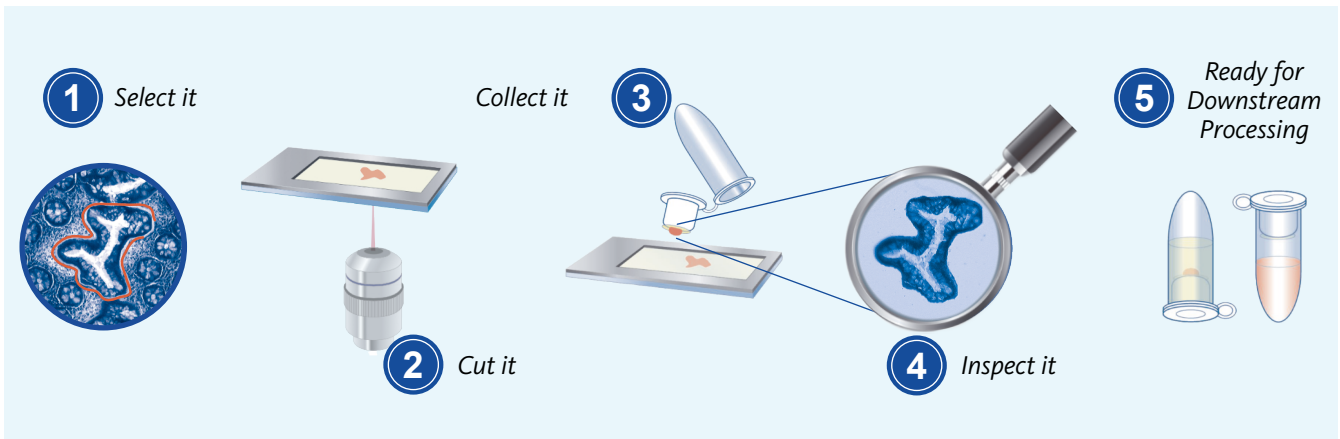
The MMI CellCut enables an easy and gentle cutting of living cells to obtain a homogeneous live-cell population. In contrast to systems, that use upright microscopes, the MMI laser comes from below. Therefore, you can dissect living cells without removing culture media to ensure the highest cell integrity for meaningful -omics applications and re-cultivation.

Advanced Single Cell Isolation

Laser microdissection with the MMI CellCut provides a fully auditable and automatically documented workflow. With the intuitive and flexible MMI CellTools analysis software, you simply select, cut, collect and inspect your sample. Afterwards, your sample is ready for downstream processing.

Contamination-free cutting

The sample is mounted between a glass slide and a carrier membrane. Therefore, the whole cutting process is contact-free, which effectively prevents contamination.



Better service starts here



"I have compared all current available LMD platforms thoroughly and I got to say the CellCut is the most impressive one and I highly recommend it to our colleagues. Thanks for bringing it to me."



Guangdun Peng, Ph.D.

Guangzhou Institutes of Biomedicine and Health
Guangzhou, China

"We appreciate the resistant MMI product quality, the professional consulting, and the competent and quick service. MMI instruments are an important basis for our in-situ analysis in cellular tissue. The MMI CellCut laser microdissection followed by gene expression analysis is complementary for further routine methods like conventional optical microscopy (fluorescence), in-situ hybridization, and immunohistochemistry."



Prof. Dr. med. Danny D. Jonigk

Director of the Institute of Pathology
Aachen University Medical Center

CellCut_Brochure_4p_EN_A

Manufacturer: Molecular Machines & Industries Germany | Switzerland | Hong Kong | USA
Breslauer Strasse 2, 85386 Eching, Germany • Phone (Germany): +49 89 319 048 40 • Phone (USA): +1 331 716 2447
Email: info@molecular-machines.com • www.molecular-machines.com

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free demo at

