MMI
SINGLE CELL SOLUTIONS

MMI Protocol

Live Cell Microdissection

Gentle Live Cell Isolation

Introduction

The MMI CellCut in combination with the approved MMI LiveCell Chamber enables contamination-free isolation of live cells in living culture. Enzyme treatments (i.e. trypsin), other potentially harmful selective reagents as well as time consuming repetitive enrichments can be avoided. The benefit is an increase in reliability, effectiveness and accuracy of your research.

Materials

- Adherent cell culture
- Culture media, trypsin, etc.
- Sterile workplace, incubator
- MMI Isolation Dishes (PN: 50302)
- MMI Membrane Rings PEN (PN: 50303)
- MMI Membrane Rings PET (PN: 50305)
- MMI Cell Chamber Stage Insert (PN: 50304)

MMI Materials

MMI Isolation Dishes

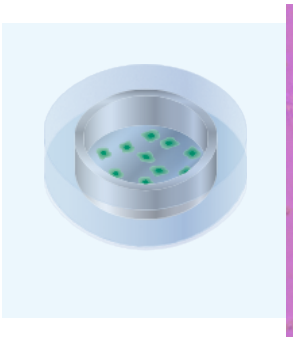
MMI Membrane Rings PEN and PET

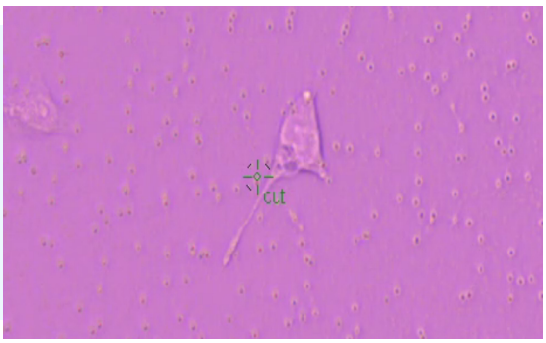
MMI Cell Chamber Stage Insert

Method

1.

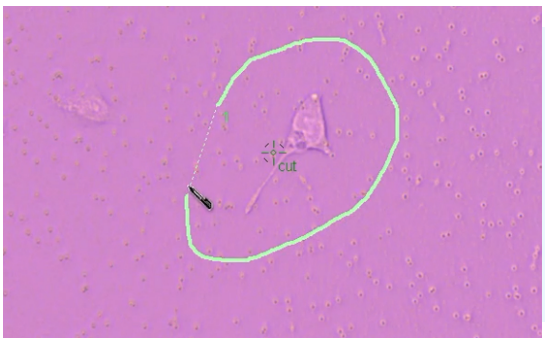
Seed and cultivate cells to the desired density on the surface of the MMI Membrane Ring (PEN or PET).
Transfer the membrane ring with cells to the adhesive area of the MMI Isolation Dish and place it on the microscope stage. Identify cells of interest (e.g. phase contrast, immuno labeling, etc.).

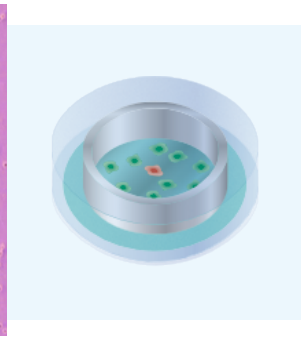




2.

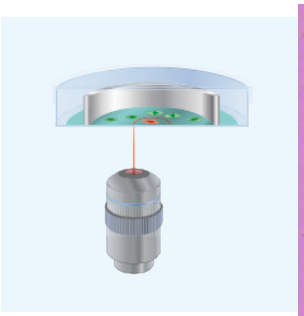
The cells of interest are selected via the MMI CellTools software.

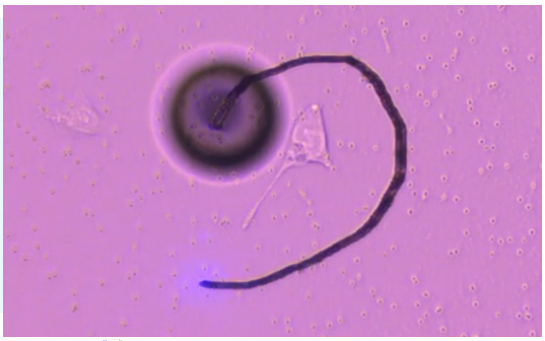




3.

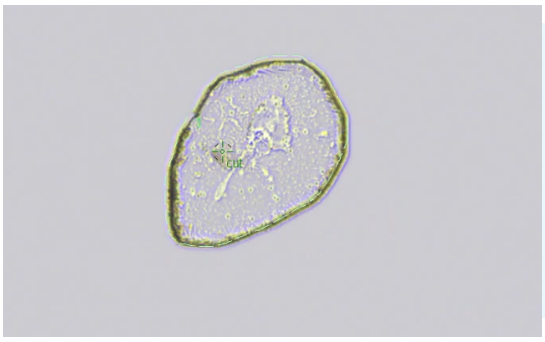
Cut the cell via laser microdissection. Unwanted cells can be destroyed or ablated by individual laser shots.
Unlike other existing laser dissection technologies, the MMI laser comes from below, thus ensuring a sterile cutting and collection of the cell. The live cell is successfully dissected, without removing the culture medium.

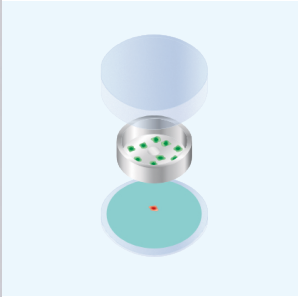




4.

After removing the MMI Membrane Ring the cells of interest remain either on the ring or in the Isolation Dish. Sufficient medium is added and either set of cells can be recultivated.





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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