MACS® UltraMount 36

Order no. 130-140-063

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1. Description

This product is for research use only.

Components 1 unit MACS UltraMount 36

Storage Store MACS UltraMount 36 dry at room temperature (+19 to +25 °C).

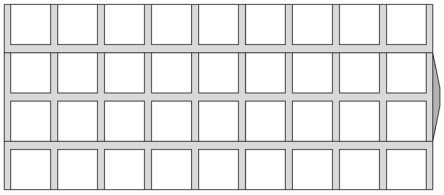


Figure 1: Schematic view of the MACS UltraMount 36.

1.1 Background information

MACS UltraMount 36 sample holder has been designed for high-throughput imaging of up to 36 specimens that fit in a 7 × 7 × 5 mm well. Samples can be embedded in the MACS UltraMount 36 straight after fixation, so that permeabilization, immunostaining, and clearing steps can be performed directly in the holder. Alternatively, embedding of the specimens can be done after immunostaining.
Detailed application protocols are available on the product page.

1.2 Technical specifications

- Size: 29 mm × 75 mm × 13.5 mm (length × width × height)
- Material: nylon
- 36 wells with 7 mm × 7 mm × 5 mm per well
- Use only with the UltraMicroscope Choros™ Imaging System
- Compatible with organic solvents
- MACS UltraMount 36 are for single use only.
- For professional laboratory use only.
- Recommended working temperature betweeen +4 °C and +40 °C.

1.3 Reagent and instrument requirements

- UltraMicroscope Choros Imaging System running ImSpector software version 7.7 or higher (# 130-137-187, # 130-137-193)
- Filling aid tool for the MACS UltraMount (12, 24, 36) (# 130-136-407)
- MACS UltraMount sample arm Choros (# 130-139-751)
- (Optional) MACS Clearing Kit (# 130-126-719) or MACS Deep Clearing Kit (# 130-136-470)

2. Use of the MACS UltraMount 36

▲ Please refer to the UltraMicroscope Blaze Imaging System user manual for detailed information on using the instrument.

▲ Staining and tissue clearing protocols of different samples and tissue types are available at **Tissue clearing protocol | Immunostaining | Miltenyi Biotec**.

▲ For an step-by-step application protocol on how to set-up automated high-throughput measurements with the MACS UltraMount sample holders refer to **Set-up of Experiment Manager in ImSpector 7.7 or higher when using MACS UltraMount multi-sample holders.**

▲ The MACS UltraMount 36 is also designed to take agarose blocks casts in a 7 × 7 × 5 mm base mold (e.g,. PolySciences, # 25374) as an alternative to the Filling aid tool for the MACS UltraMount (12, 24, 36).

2.1 Sample embedding using the Filling aid tool for the MACS UltraMount (12, 24, 36)

▲ For gel preparation, dissolve 1.5% agarose in double-distilled water or 1% Phytagel™ in tap water by heating it up using a microwave until clear.

1. Place Filling aid tool for the MACS UltraMount (12, 24, 36) on parafilm on a tray, e.g., a large glass petri dish.
2. Place uncleared samples (maximum of 24 per round, either non-stained or pre-stained) into each well of the Filling aid tool for the MACS UltraMount (12, 24, 36). Use the "R" and "L" sign for orientation.

   ▲ **Note:** Make sure that the samples are as dry as possible. Process sample fast to avoid drying out. If many samples are processed, place and fill each well one after the other to avoid sample drying.

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3. Fill up the wells to the very top with hand warm agarose/phytagel and let it harden for at least 10 minutes at room temperature or +4 °C for faster hardening. Store protected from light, if samples are already stained.

   ▲ **Note:** If it agarose leaks despite the parafilm, place the parafilm on top of a 60 mm glass petri dish and press the base mold into it. This seals the base mold tight.

4. After hardening of the gel, peel away the parafilm carefully to avoid block damage.

5. Invert a 10 µL pipette tip, so that the adapter side faces the sample to remove the agarose blocks from the filling aid.

6. Push the samples from the bottom ("L" and "R" not visible) and proceed with staining or clearing if samples are already stained. Staining and tissue clearing protocols of different samples and tissue types are available at **Tissue clearing protocol | Immunostaining | Miltenyi Biotec**.

   ▲ **Note:** In case of agarose ripping or sticking to surfaces, incubate at +4 °C for at least 10 minutes before removal. Push out the sample carefully from the opposite side. Alternatively, repeat process using a higher agarose or Phytagel concentration or switch to Phytagel if agarose was used.

7. Repeat steps 1–6 until all 36 samples are mounted and ready for imaging.

2.2 Sample mounting

After clearing the blocks containing the sample, mount them upside down in MACS UltraMount 36 sample holder. The blocks are conical due to a specific shape of the filling aid – smaller narrow part is the top with the sample. The sample holder is inversely shaped, so the conical blocks can be slid into the compartments from the side.

▲ **Note:** If samples not fitting perfectly due to stronger dehydration or different protocol, either cut away excess material on the sides not relevant for imaging, or use either UV glue (e.g., Bondic®) or super glue (e.g., Loctite® super glue gel control) at the bottom of the well if the sample shrunk too much.

Refer to **www.miltenyibiotec.com** for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com for local Miltenyi Biotec Technical Support contact information.

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