Miltenyi Biotec

M Columns

Order no. 130-042-801

Contents

1. Description

This product is for research use only.
For use by professional laboratory personnel only.

Components	10 M Columns for the isolation of magnetically labeled molecules; sterile packed.
Storage	Store columns dry at +10 to +35 °C and protected from light. Do not use after expiration date.

1.1 Important safety information

⚠ WARNING **Contamination or infection could result in death or serious injury depending on the material used.**

All biological material must be considered potentially infectious

- Regulations for the treatment and disposal of infectious materials must be observed.

1.2 Background information

The patented MACS® Column Technology is based on the use of MACS MicroBeads, MACS Columns and MACS Separators. M Columns have been developed for the gentle isolation of MicroBead-labeled molecules. As MACS MicroBeads are extremely small, superparamagnetic particles, a high-gradient magnetic field is required to retain the labeled molecules. M Columns contain an optimized matrix to generate this strong magnetic field when placed in a permanent magnet such as the MiniMACS™, OctoMACS™, or SuperMACS™ II Separator. Washing and elution steps are performed by simply rinsing the column with an appropriate buffer as described in the individual µMACS™ MicroBeads data sheet or as tested experimentally.

1.3 Technical specifications

- For capacity of the M Column, refer to the individual µMACS MicroBeads data sheet.
- Columns are "flow stop" and do not run dry.
- Void volume: 80 µL.
- Recommended filling volume: 1 mL.
- Typical flow rate for PBS: 300 µL/minute.
- The columns are for single use only.

1.4 Applications

M Columns are used for molecular biology and protein biochemistry applications such as isolation of mRNA, immunoprecipitated protein, or epitope-tagged protein in combination with µMACS MicroBeads and a MiniMACS, OctoMACS, or SuperMACS II Separator.

▲ M Columns are for molecule isolation only. Do not use M Columns for cell separation.

▲ Do not use M Columns in combination with magnetic particles other than µMACS MicroBeads. Magnetic forces in the column are very high and may damage biological material if other beads are used.

▲ M Columns are not suitable for particles larger than 30 µm. To remove clumps and to prevent aggregates in sample, resuspend material carefully and precipitate clumps by centrifugation before applying the sample on the column.

▲ Samples or buffers with high viscosity might cause reduced column flow or column clogging.

1.5 Reagent and instrument requirements

- Equilibration buffer for column preparation: Buffer supplemented with 1% detergent, e.g. SDS or Ecosurf™ EH-9. Degas buffer before use, as air bubbles could block the column
- Separation buffer: Any buffer suitable for magnetic separation (for details, see individual µMACS MicroBeads data sheet). If the separation buffer contains 1% detergent, it can also be used for column preparation. Degas buffer before use, as air bubbles could block the column

  ▲ **Note:** Use degassed buffer only! Degas buffer by applying vacuum or sonification for ten minutes, preferentially with buffer at room temperature. Excessive gas in running buffer will form bubbles in the matrix during isolation. This is particularly important, when the applied buffer has a different temperature as the M Column, e.g. when using cold buffer on a column at room temperature. Air bubble formation in the M Column may lead to clogging of the column and decrease the quality of isolation.
- µMACS MicroBeads for magnetic labeling of target molecules
- MiniMACS Separator (# 130-042-102), OctoMACS Separator (# 130-042-109), or SuperMACS II Separator (# 130-044-104)
- MACS MultiStand (# 130-042-303) in combination with MiniMACS Separator or OctoMACS Separator

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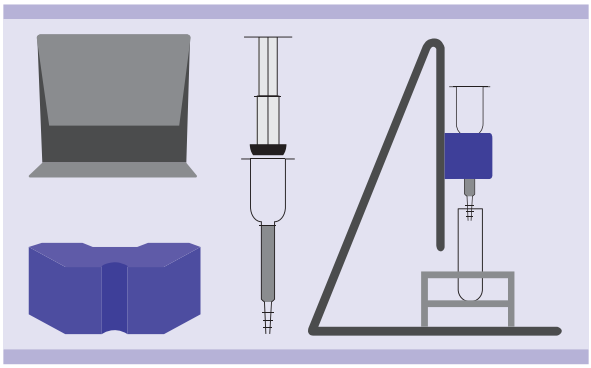
- Adapter for MS, LS, and LD Columns for use with SuperMACS II Separator
- MACS Acrylic Tube Rack (# 130-041-406) or OctoMACS Acrylic Tube Rack (# 130-090-448)

2. Preparation of M Columns

1. Insert M Column with the column wings to the front into MACS Separator according to A) or B).

A) Use with MiniMACS or OctoMACS Separator



Attach MiniMACS or OctoMACS Separator to the MultiStand and place M Column in the separator. Place a collection tube under the M Column.

▲ **Note:** Check that the ejection blocks in the gap of the magnet are attached before placing the MACS Column into the magnetic field of the MiniMACS or OctoMACS Separator.

B) Use with SuperMACS II Separator

For use of M Columns with the SuperMACS II Separator please refer to the respective data sheet.

2. Apply 250 µL of degassed Equilibration Buffer on top of the column and let the solution run through.
3. If separation buffer is different from equilibration Buffer, apply 100 µL of degassed separation buffer and let the solution run through. The M Column is now ready for magnetic separation. Perform the magnetic separation as indicated on the individual µMACS MicroBeads data sheets.

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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