Miltenyi Biotec

Multi-8 Column, molecular
Multi-96 Column, molecular

Multi-8 Column	130-092-444
Multi-96 Column	130-092-445

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1. Description

This product is for research use only.

Components **12 Multi-8 Columns** for the isolation of magnetically labeled molecules, sterile packed; 1 MultiColumn Frame; 1 Deep Well Block, 2.5 mL, with sealing foil; 1 Microtiter Plate U-bottom, with adhesive sealing foil (# 130-092-444)
or
4 Multi-96 Columns, sterile packed, with 4 Deep Well Blocks, 2.5 mL; 4 Microtiter Plates U-bottom, with adhesive sealing foils (# 130-092-445).

Product format Multi-8/96 Columns are provided with Deep Well Blocks to collect flow-through and wash fractions, and Microtiter Plates for collection of the eluate. An enclosed adhesive sealing foil for Microtiter Plates enables storage of the eluate.
Multi-8 Columns are single sterile packed to enable a flexible use of one or multiple column strips per isolation. Therefore, one or more Multi-8 Columns are placed into the provided MultiColumn Frame. The Deep Well Block is provided with a seal that can be cut and used for individual deep well rows to keep unused wells clean.
Multi-96 Columns contain 12 Multi-8 Columns placed into the MultiColumn Frame and sterilized together with the Deep Well Block, 2.5 mL.

Storage Store columns dry and protected from light. Do not use after expiration date.

1.1 Background

The patented MACS® Column Technology is based on the use of MACS MicroBeads, MACS Columns, and MACS Separators. Multi-8 Columns and Multi-96 Columns have been developed for the gentle isolation of MicroBead-labeled molecules with the MultiMACS™ Separator. As MACS MicroBeads are extremely small, superparamagnetic particles, a high-gradient magnetic field is required to retain the labeled molecules. Multi-8 Columns and Multi-96 Columns contain an optimized matrix to generate this strong magnetic field when placed in the permanent magnet of the MultiMACS Separator. Washing and elution steps are performed by simply rinsing the column with an appropriate buffer as described in the individual user manual of the MultiMACS Kit (or as tested experimentally).

1.2 Technical specifications

- For capacity of the Multi-8 Column or Multi-96 Column, refer to the individual MultiMACS user manual.
- Columns are "flow stop" and do not run dry.
- Void volume: 27 µL.
- Typical flow rate: 1 mL/3.5 minutes.
- The columns are for single use only.

1.3 Product applications

Multi-8/96 Columns, molecular are used for molecular biology and protein biochemistry applications such as isolation of mRNA or protein in combination with µMACS™ MicroBeads and a MultiMACS Separator.

▲ Multi-8/96 Columns are for molecule isolation only. Do not use Multi-8/96 Columns for cell separation.

▲ Do not use Multi-8/96 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.

▲ Multi-8/96 Columns are not suitable for particles larger than 30 µm. To remove clumps and to prevent aggregates in sample, resuspend material thoroughly and precipitate clumps by centrifugation before applying the sample onto the column.

▲ Samples or buffers with high viscosity might cause reduced column flow or column clogging. To filter lysate before application on Multi-8/96 Column, Multi-8 Filter (# 130-092-546) or Multi-96 Filter (# 130-092-547) are recommended.

1.4 Reagent and instrument requirements

- Use degassed buffer only! Degas buffer by applying vacuum or sonification for ten minutes, preferentially with buffer at room temperature. Excessive gas in buffers will form bubbles in the column matrix that may lead to clogging of the column and decrease the quality of isolation. This is particularly important when the applied buffer has a different temperature as the Multi-8/96 Column, e.g. when using cold buffer on a column at room temperature.
- **Equilibration Buffer for column preparation:** buffer supplemented with 1% detergent, e.g. SDS or Ecosurf™ EH-9, can be included in µMACS or MultiMACS Kit.
- **Wash/Elution Buffers, further reagents:** for details, see individual µMACS or MultiMACS user manual.

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- (Optional) Multi-8 Filter (# 130-092-546) or Multi-96 Filter (# 130-092-547) for filtering the lysate to prevent reduced column flow or column clogging.
- µMACS MicroBeads for magnetic labeling of target molecules included in µMACS Reagents/Kits or MultiMACS Kits.
- MultiMACS Separator.

2. Protocol for Multi-8 and Multi-96 Columns

2.1 Usage of the Multi-8 and Multi-96 Columns

For semi-automated use of the MultiMACS Separator, follow procedure below. For fully automated robotic use, prepare Multi-8 Columns as mentioned below, then set up system and run procedure according to software and robotic instrument.

1. When using Multi-8 Columns, unpack up to 12 Multi-8 Columns and place them into the MultiColumn Frame.

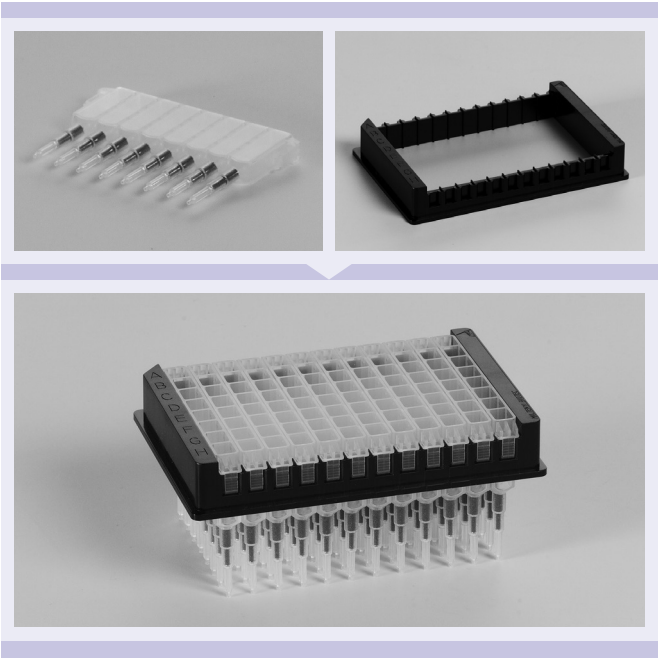


Figure 1: Single Multi-8 Columns, MultiColumn Frame, and complete Multi-96 Column Block.

2. Start MultiMACS Separator according to MultiMACS Separator user manual.

3. When the MultiMACS is in the following position (Fig.2) and notice "INSERT MULTI-8/96 COLUMNS" appears on the Touch Display, insert MultiColumn Frame with Multi-8 Columns or Multi-96 Column into the Column Holder of the MultiMACS Separator.



Figure 2: MultiMACS with column holder and magnet.

4. Continue process according to MultiMACS user manual. MultiMACS then moves columns into MultiMACS 96 Magnet.
5. Perform molecular procedure according to MultiMACS user manual.

2.2 General tips for using Multi-8 and Multi-96 Columns

▲ The format of Multi-8 Columns is compatible to 8-channel pipettes and automated liquid handling systems.

▲ Insert pipette tip just 1 mm into the cavity during pipetting and do not touch the rim of the Multi-8/96 Column with the pipette to enable reuse of pipette tips without cross-contamination.

▲ For elution, pipette small buffer volumes or hot solutions directly onto the column matrix. Again, insert pipette tip just 1 mm into the cavity during pipetting.

> ▲ **Note:** Do not pipette against the side of the cavity to prevent loss of buffer volume or temperature decrease.

▲ Pipette buffers containing detergent in a multi-dispense mode (one aspiration for all dispenses).

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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