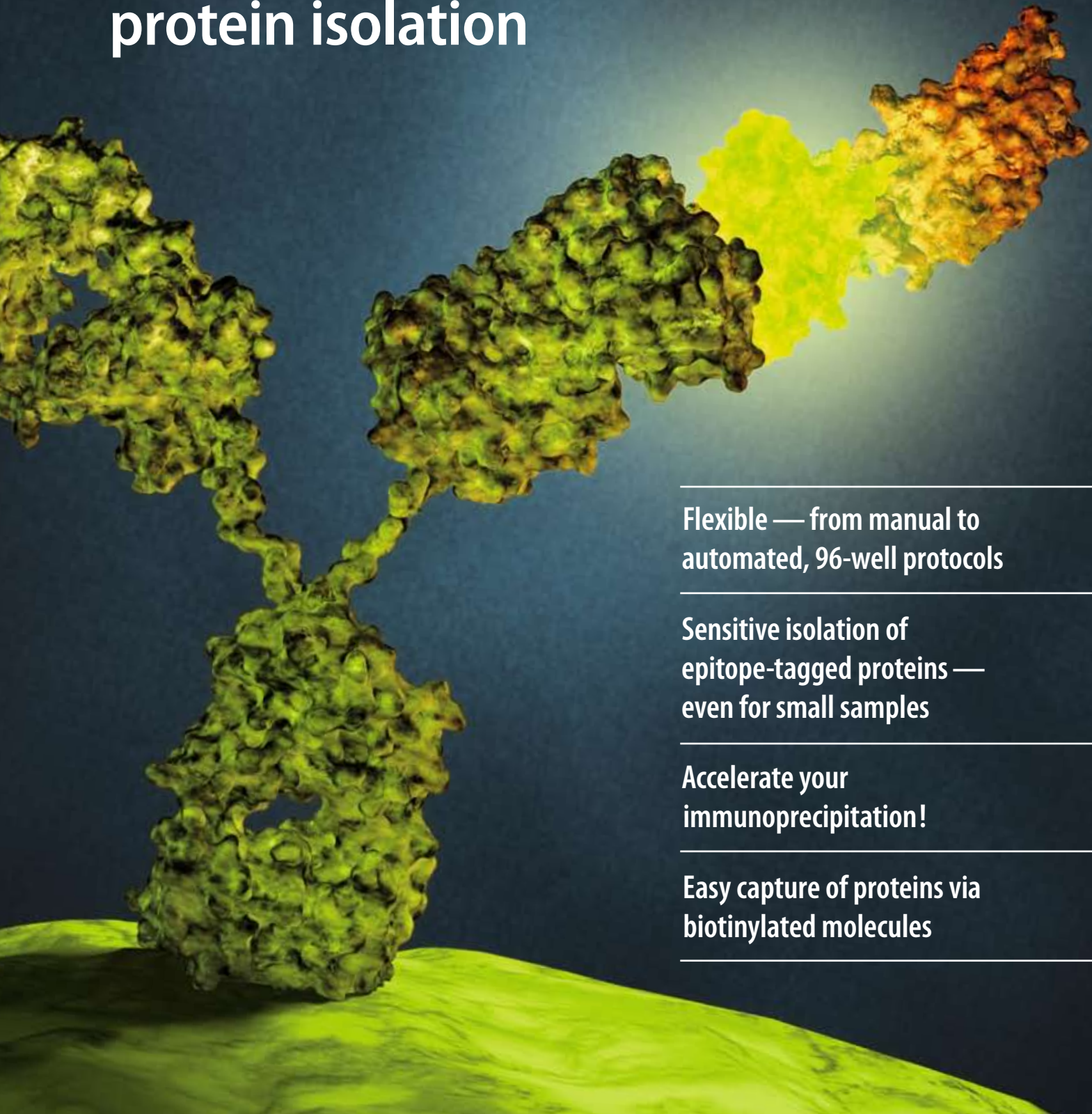




MACS® Technology pushing the boundaries

Fast and sensitive protein isolation



Flexible — from manual to
automated, 96-well protocols

Sensitive isolation of
epitope-tagged proteins —
even for small samples

Accelerate your
immunoprecipitation!

Easy capture of proteins via
biotinylated molecules

MACS® Technology by Miltenyi Biotec

Comprehensive solutions from cells to molecular analysis

Since its introduction in 1989, MACS® Technology has become the gold standard for cell separation. Nowadays, Miltenyi Biotec stands for more than cell separation, offering over 1000 innovative research products for biomedical research and life sciences. The MACS Product portfolio includes instruments

and reagents for sample preparation, cell separation, cell analysis, cell culture, and molecular biology. Over the last 20 years, researchers have published more than 12,000 papers with our products. Miltenyi Biotec has a strong commitment to constantly develop new products for current and future research.



MACS Sample Preparation

The quality of an experiment strictly depends on the quality of the sample preparation. Miltenyi Biotec offers the innovative instrument gentleMACS™ Dissociator for fast and gentle sample preparation from solid tissues as well as cultured cells. Specific programs and tubes were developed for molecular applications.

MACS Cell Separation

A large panel of MACS MicroBeads and MicroBead Kits is available for the isolation of virtually any cell type. The cells can be separated manually or automatically. The autoMACS™ Pro Separator was designed for automated cell sorting of multiple samples.

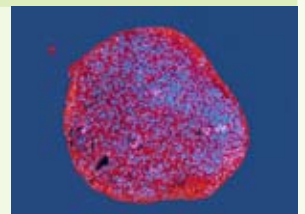


MACS Cell Analysis

Miltenyi Biotec provides a large selection of monoclonal antibodies and kits for fluorescence microscopy and flow cytometry. The innovative MACSQuant™ Analyzer is an extremely compact, easy-to-use benchtop cell analyzer. The instrument is fully automated and enables absolute cell count.

MACS Cell Culture

The product portfolio for cell culture includes media as well as recombinant cytokines and growth factors.



MACSmolecular

Miltenyi Biotec provides products for protein isolation and detection, mRNA purification and amplification, cDNA synthesis and labeling, microRNA analysis as well as microarray technologies and instrumentation. Also on offer are genomic services: gene and microRNA expression analyses, array-CGH, and bioinformatics.



MACSmolecular products

MACS® Technology for molecular applications

Products for fast and sensitive protein isolation

Proteomic analyses are conducted in many research fields to gain a better understanding of particular biological processes and play a major role in drug screening and target identification procedures.

Miltenyi Biotec offers a wide variety of products based on the renowned MACS® Technology that isolate proteins and their interacting partners. MACS Technology for protein isolation is simple, straightforward, and takes you from cell or tissue sample to pure protein in less than two hours. The high rate of recovery and extraordinary sensitivity is achieved with tiny superparamagnetic MicroBeads. These 50-nm particles instantly bind to their targets and allow protein isolation even from small amounts of starting material or when working with rare proteins. The low rate of background binding of MACS MicroBeads and the usage of proven binding moieties, such as monoclonal antibodies, protein A or G, or streptavidin enables highly specific isolation of target proteins.

One technology for several applications

- Isolation of epitope-tagged proteins
- (Co)-Immunoprecipitations of proteins
- Isolations of proteins via biotinylated capture probes

Manual to automated — it's your choice!

Choose between a manual procedure with 1–4 samples in parallel using the μ MACS™ Separator, or use the semi-automated approach with up to 96 samples by utilizing the MultiMACS™ M96 Separator. Fully automated approaches up to 96 samples are easily set up by integrating the MultiMACS M96 Separator in a robotic system.

Caught your attention?

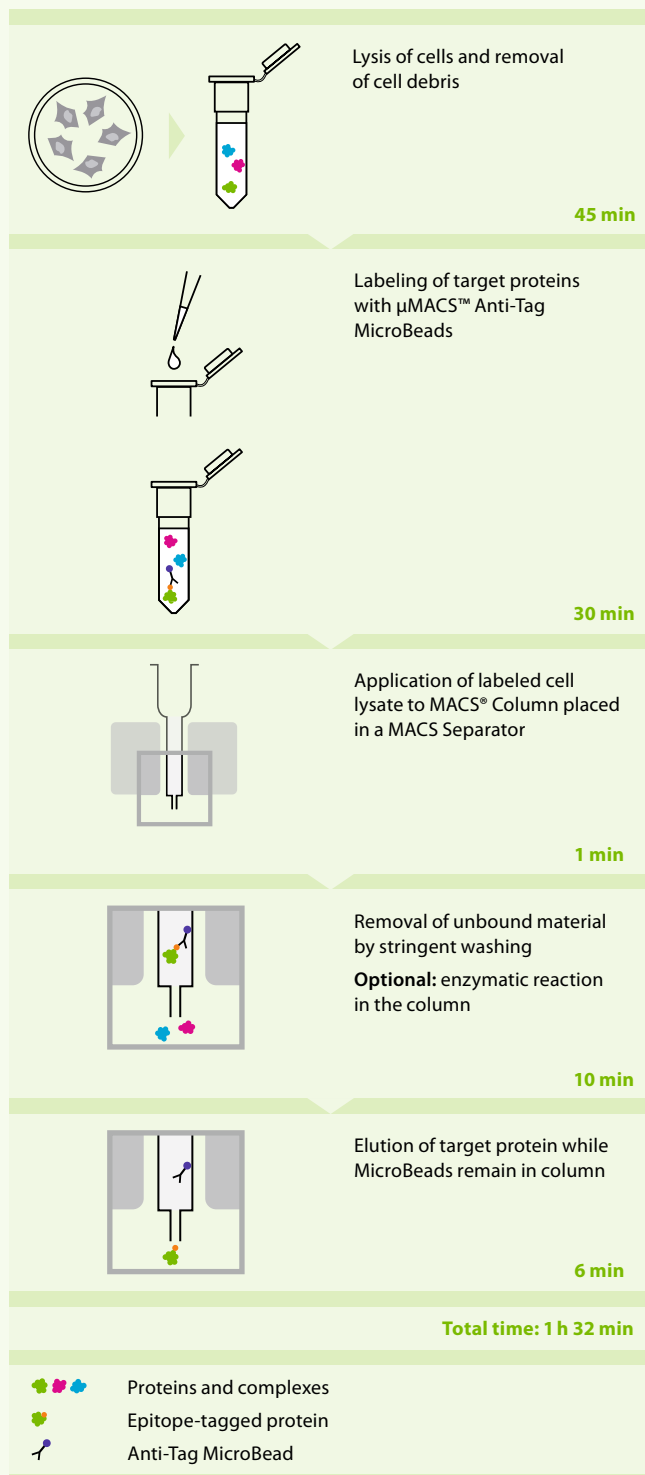
Have a look at the following pages and learn how MACS Technology has the potential to advance your protein research.

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Selected from more than 12,000 papers using products from Miltenyi Biotec

How MACS® Technology works

To isolate proteins quickly and sensitively



The operating principle

Superparamagnetic μ MACS™ MicroBeads are applied to the cell lysate and instantly bind to their target protein. The magnetically labeled protein is then isolated and purified in a MACS Column positioned within the magnetic field of a MACS Separator. After thorough washing, pure protein is eluted (for details please refer to fig. 1).

How you benefit from MACS® Technology for protein isolation

High sensitivity

Even rare proteins can be isolated.

High Speed

Less than two hours from cells or tissue to pure protein.

High specificity

Low background binding.

High recovery

No loss of material as centrifugation steps and buffer removal are rendered unnecessary.

Reproducibility and reliability

Protein isolation procedures can be easily automated.

Did you know?

Instead of eluting the protein, enzymatic reactions such as kinase assays can be performed directly in the column. For incubation at elevated temperatures, the thermoMACS™ and MultiMACS™ M96thermo Separators are available.

Fig. 1: Principle of MACS Technology for isolation of epitope-tagged proteins.

The components

1. μ MACS™ MicroBeads

- Superparamagnetic — only magnetized in a magnetic field
- Small in size — just 50 nm in diameter
- Non-sedimenting with extremely high reaction kinetics — instantly bind target protein
- Low non-specific binding

Benefit: High sensitivity and specificity—even rare proteins can be efficiently isolated while enrichment of non-specific proteins is minimal.

2. MACS Column

- Packed with steel spheres that enhance the magnetic field — essential to retain nanometer-sized μ MACS™ MicroBeads bound to target protein
- Buffers run by gravity flow, so there is no need for centrifugation or buffer removal, thus preventing a loss of target
- Thorough rinsing procedure

Benefit: High recovery and purity.

3. MACS Separators

The μ MACS **Separator** is a permanent magnet for manual processing of up to four samples in parallel. For higher throughput experiments, the procedure can easily be scaled up to a 96-well format utilizing the **MultiMACS M96 Separator**. A fully automated process is achieved by integrating this benchtop instrument into a robotic pipetting system.

Benefit: High level of reproducibility and reliability.



Fig. 2: μ MACS Anti-GFP MicroBeads



Fig. 3: MACS Column



Fig. 4: MultiMACS M96 Separator



Fig. 5: μ MACS Separator

HA • His • c-myc • GFP • GST

Manual to automated isolation of tagged proteins

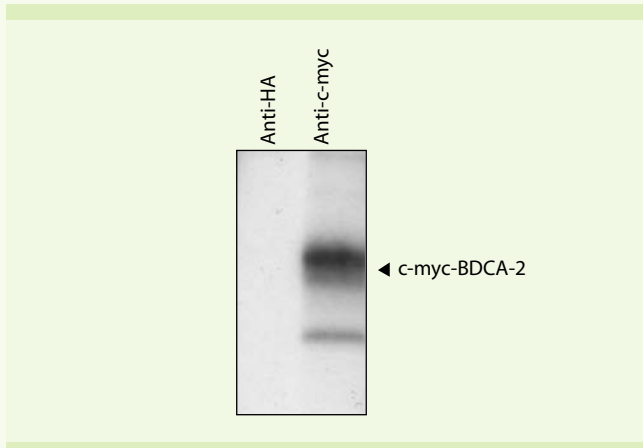


Fig. 1: Specific isolation of recombinant fusion protein with μMACS Anti-c-myc MicroBeads

Cells were transfected with a vector encoding c-myc-BDCA-2 and labeled with ³⁵S-methionine. The recombinant c-myc-BDCA-2 protein was purified with μMACS Anti-c-myc MicroBeads.

Left lane: control purification with Anti-HA MicroBeads. The figure shows an autoradiogram after SDS-PAGE.

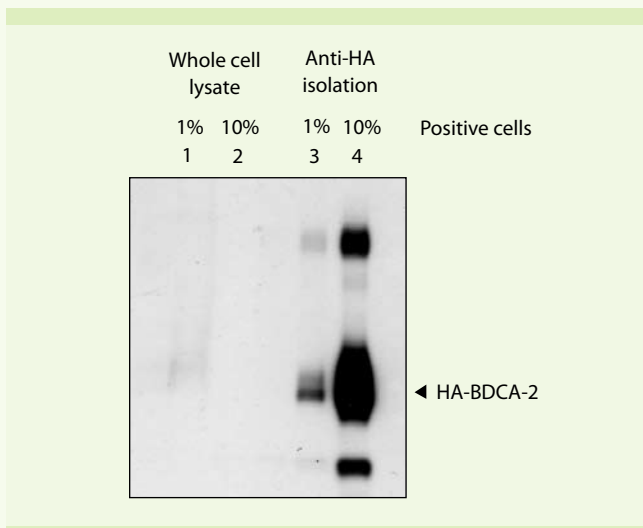


Fig. 2: Sensitive isolation of recombinant fusion protein with μMACS Anti-HA MicroBeads

10⁷ mouse pre-B cells (1881) were transfected with a vector encoding HA-tagged BDCA-2, and protein isolation was performed using cell populations with either 1% (lane 1, 3) or 10% (lane 2, 4) positively transfected cells. Whole cell lysates (lane 1, 2) or 20% of the protein isolation eluate with μMACS Anti-HA MicroBeads (lane 3, 4) were separated by SDS-PAGE, blotted on a membrane, and detected by using an Anti-HA-HRP antibody.

Isolation of epitope-tagged proteins

The μMACS™ Tag Isolation Kits contain μMACS MicroBeads coupled to high-quality monoclonal antibodies specific for proteins tagged with:

- HA (hemagglutinin)
- His (histidine-epitope)
- c-myc
- GFP (green fluorescent protein)
- GST (glutathione S-transferase)

These μMACS Anti-Tag MicroBeads are optimized for the specific and sensitive isolation of recombinant epitope-tagged proteins. Particularly when working with eukaryotic cells, sensitive isolation with low rate of background binding is essential.

Benefits of MACS® Technology for recombinant protein isolation

High specificity

Specific monoclonal antibodies target the tag sequence and ensure pure protein eluates (fig. 1).

High sensitivity

Due to the fast reaction kinetics of μMACS MicroBeads, important for the isolation of rare proteins or when working with limited starting material (fig. 2).

High speed

No need for time-consuming pre-clearing and centrifugation. Proteins are isolated in about 90 minutes.

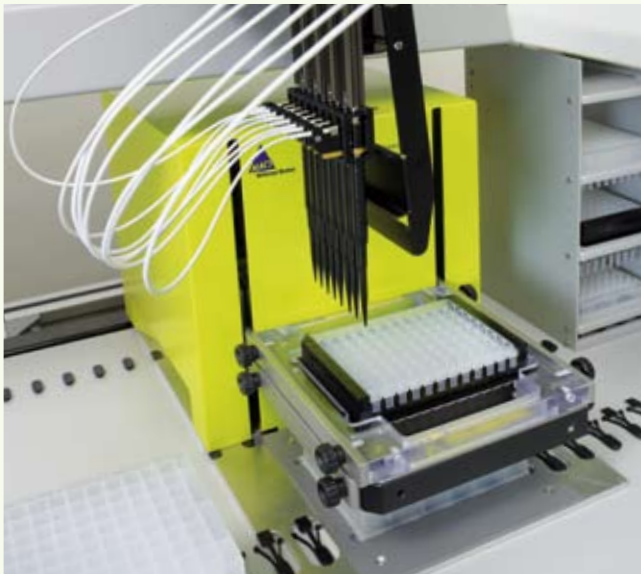


Fig. 3: MultiMACS M96 Separator integrated in pipetting robot
For fully automated protein isolation in a 96-well format.

Automated 96-well isolation of epitope-tagged proteins in less than two hours

The **MultiMACS™ Tag Isolation Kits** enable researchers to magnetically isolate c-myc-, GFP-, GST-, HA-, or His-tagged proteins in a higher throughput procedure.

Up to 96 samples can be processed in parallel with the compact, benchtop MultiMACS M96 Separator (fig.3), either manually or fully automatically when integrated in a pipetting roboter.

Analysis of epitope-tagged proteins

Monoclonal Anti-c-myc, Anti-GFP, Anti-HA, and Anti-His antibodies are available with several conjugates:

- Biotin
- HRP
- FITC
- PE

Fluorochrome-conjugated Anti-Tag antibodies allow immunofluorescence analysis by flow cytometry or fluorescence microscopy. Biotinylated antibodies can be used in combination with streptavidin conjugates, such as streptavidin-HRP, in Western blot detection, or with fluorochrome-streptavidin for immunofluorescence analysis.

Directly coupled to horseradish peroxidase (HRP), the antibodies simplify Western blot (fig. 4) or ELISA analysis because incubations with secondary antibodies are not necessary.

The antibodies are ideally suited for

- flow cytometry / FACS analysis
- fluorescence microscopy
- immunoblotting / Western blotting (fig. 4)
- ELISA

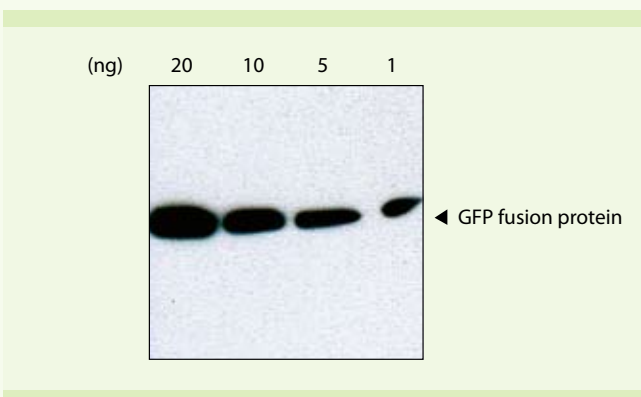


Fig. 4: Sensitive detection of recombinant fusion protein with Anti-GFP-HRP antibody

20 ng, 10 ng, 5 ng, and 1 ng GFP fusion protein were separated by SDS-PAGE and blotted on PVDF membrane. GFP fusion proteins were detected with Anti-GFP-HRP antibody (1:5,000, 1 hour, room temperature) and ECL reagent (GE Healthcare).

Immunoprecipitation and ChIP-in-a-column

From single-sample to automated, 96-well processes

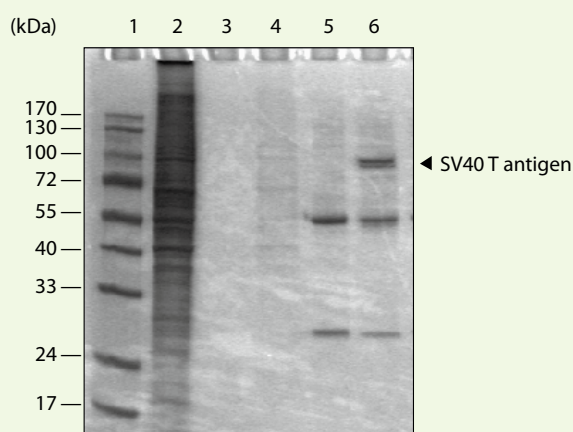


Fig. 1: Immunoprecipitation of the SV40 large T antigen

Immunoprecipitation was performed from COS-7 cells using μ MACS Protein G MicroBeads. Coomassie-stained gradient SDS-PAGE of a protein marker (lane 1), the flow through (lane 2), the wash fraction (lane 4), the immunoprecipitated large T antigen (lane 6, indicated by the arrow), and an isotypematched control antibody (lane 5).

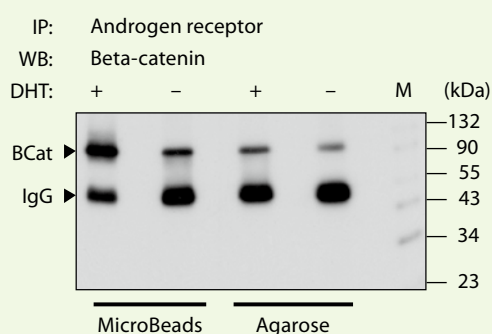


Fig. 2: Co-immunoprecipitation of Beta-Catenin

Androgen receptor was immunoprecipitated from dihydrotestosterone (DHT)-stimulated (lanes 1, 3) or unstimulated (lanes 2, 4) LNCaP cells with μ MACS Protein G MicroBeads (lanes 1, 2) or with Protein A/G agarose beads (lanes 3, 4). Western blot using anti-beta-catenin antibody shows beta-catenin (BCat) co-immunoprecipitated with androgen receptor. (Courtesy of D. Mulholland, Vancouver, Canada)

Immunoprecipitation with μ MACS™ Protein A/G MicroBeads

The μ MACS™ Protein A/G MicroBeads were developed for small-scale analytic immunoprecipitation (IP).

The extremely small μ MACS Protein A/G MicroBeads ensure very fast reaction kinetics: Formation of the labeled immune complex is generally completed in 30 minutes — there is no need for overnight incubation.

High sensitivity

Due to the small size of μ MACS MicroBeads, binding to target proteins is extremely fast and efficient; higher amounts of target protein can thus be captured per sample.

High speed

MACS® Technology saves time: The experiment can be completed within 2 hours, while conventional IP may require up to one day of work.

High specificity

The minimized non-specific binding of μ MACS Protein A/G MicroBeads and the efficient and gentle washing in the column significantly reduce background binding (fig. 1).

The washing procedure can be optimized for any target molecule, and even fragile protein complexes can be successfully isolated by co-IP with MACS Technology (fig. 2).



ChIP-in-a-column with MACS® Technology

The **µMACS Protein A/G MicroBeads** improve standard immunoprecipitation and significantly accelerate the search for interacting proteins. Chromatin immunoprecipitation (ChIP) protocols also benefit from the higher specificity and lower background binding of µMACS Protein A/G MicroBeads (fig. 3).

Automated 96-well immunoprecipitation or ChIP

The **MultiMACS™ M96 Separator** allows the parallel processing of up to 96 samples with Multi-8 or Multi-96 Columns. This compact benchtop instrument allows semi-automated or—in combination with a robotic pipetting system—fully-automated magnetic isolation of molecules.

Both immunoprecipitation and ChIP can easily be upgraded for the automated processing of up to 96 samples in parallel using the **MultiMACS Protein A/G Kits** (fig. 4).

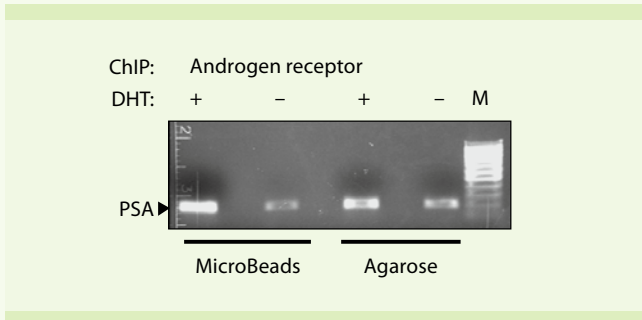


Fig. 3: Chromatin immunoprecipitation (ChIP)

PCR reaction of the prostate-specific antigen (PSA) gene using DNA obtained by ChIP from cultured cells. Immunoprecipitation was carried out with anti-androgen-receptor antibody and µMACS Protein G MicroBeads (lanes 1, 2) or with Protein A/G agarose beads (lanes 3, 4). Dihydrotestosterone (DHT)-stimulated (lanes 1, 3) or unstimulated (lanes 2, 4) cells were used for ChIP. (Courtesy of D. Mulholland, Vancouver, Canada)

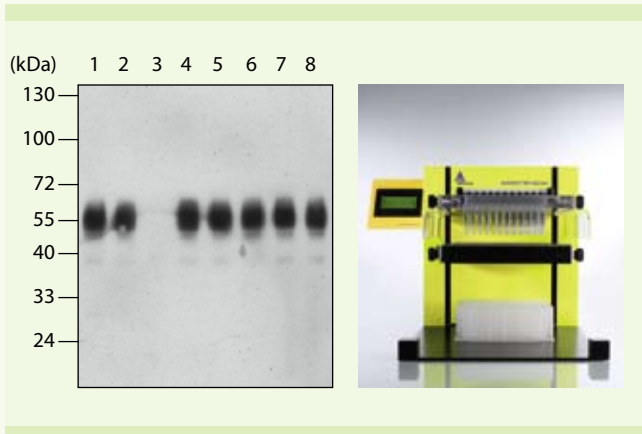


Fig. 4: Isolation of mouse PD-1 protein with MultiMACS Protein G MicroBeads

Cell lysates of 10^6 CHO cells, lane 3, and CHO cells expressing c-myc-tagged mouse PD-1 tagged with c-myc, lane 1, 2, 4–8, were immunopurified using an anti-c-myc horseradish peroxidase conjugate and MultiMACS Protein G MicroBeads on a Multi-8 Column strip. Purified eluates were analyzed via SDS PAGE and subsequent immunoblotting using anti-c-myc antibodies.

Isolation of proteins via biotinylated capture probes

From single-sample to automated, 96-well processes

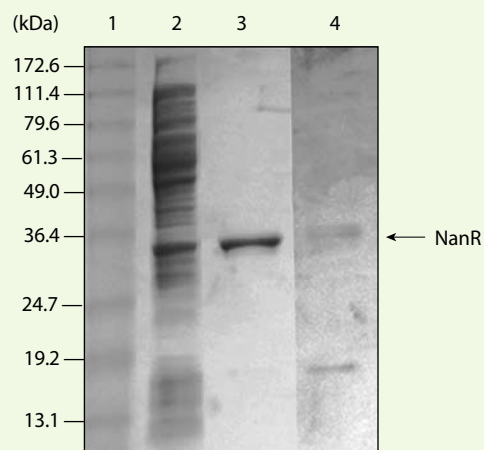


Fig. 1: Purification of NanR

Lanes show Coomassie-stained samples fractionated by 4–20% SDS-PAGE. Lane 1: Benchmark Prestained Markers (Invitrogen); lane 2: soluble protein fraction from JM109 harboring pSX675 after induction with 0.2% L-arabinose (30.9 μ g); lane 3: purified recombinant NanR (3.5 μ g); lane 4: NanR from *E. coli* MC4100 (1.68 μ g).

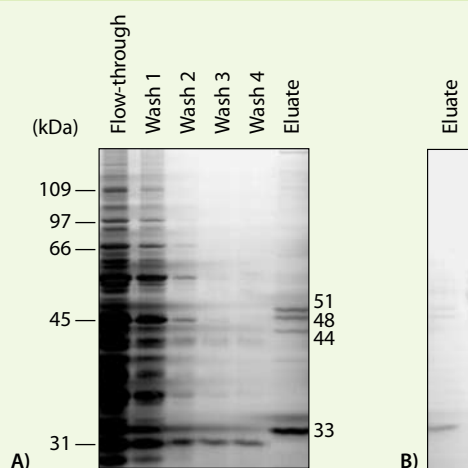


Fig. 2: Isolation of specific RNA binding proteins

Yeast crude extract was pre-cleared and subsequently incubated with a full-length Mating Factor A2 mRNA bound to a 3'-biotinylated complementary single-stranded oligonucleotide and magnetically labeled with μ MACS Streptavidin MicroBeads. The figure (A) shows the silver-stained SDS gel. Four proteins with molecular weights of 33, 44, 48, and 51 kDa, which bind specifically to the RNA sequence, were isolated (eluate). As a control a magnetically labeled mutant mRNA, lacking the binding site for Mating Factor A2 binding proteins, was used. In the control experiment (B) no specific proteins were isolated. (Courtesy of Dr. A. Albig, Washington State University, USA)

Isolation of biotinylated molecules

The μ MACS™ Streptavidin Kit specifically isolates of any molecule interacting with a biotinylated capture probe—also very useful for searching and analyzing binding partners of biotinylated proteins; for example, receptor ligands or signalling activators. The principle also works for nucleic acids, such as mRNA or viral sequences. Even large molecular complexes, organelles, or viable viruses can be purified with MACS® Technology.

Applications for the μ MACS Streptavidin Kit

- Detection and analysis of:
 - protein-protein interaction
 - DNA-protein interaction (fig. 1)
 - RNA-protein interaction (fig. 2)
- Immunoprecipitation using biotinylated antibodies
- Isolation of specific transcripts
- Isolation of microRNAs
- Isolation of tRNA molecules
- Isolation of ribozymes
- Virus isolation
- Serial analysis of gene expression (SAGE)
- Subtractive hybridization
- Phage and yeast display

Protocols for each application are available at www.miltenyibiotec.com.

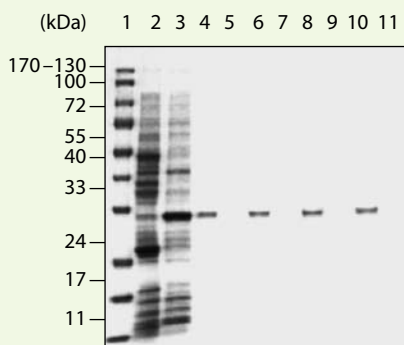


Fig. 3: Isolation of HA-tagged proteins with MultiMACS Streptavidin MicroBeads

100 μ L lysates of non-transfected *E. coli* (control lysate) and *E. coli* transfected with an expression vector for HA-tagged protein (test lysate) were incubated with 2 μ g anti-HA-Biotin and 100 μ L of Streptavidin MicroBeads for 30 minutes on ice. The proteins were then purified with a MultiMACS M96 Separator and analyzed on an SDS gel stained with Coomassie Brilliant Blue. Lane 1: molecular weight marker; lane 2: *E. coli* control lysate; lane 3: transfected *E. coli* lysate; lanes 4, 6, 8, 10: purified test lysate; lanes 5, 7, 9, 11: purified control lysate.

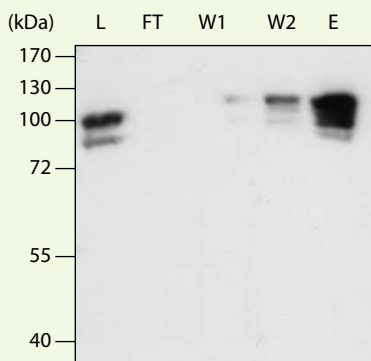


Fig. 4: Isolation of phosphorylated STAT-3 (pSTAT-3) from activated T cells

T cells from human PBMCs were activated and expanded in the presence of IL-2 using the T Cell Activation/Expansion Kit (# 130-091-441). After three days, cells were incubated with IL-15 for 15 minutes, washed, and lysed with Cell Lysis Buffer. Whole cell lysate was incubated with a biotinylated 31-bp DNA probe comprising the STAT-3 binding sequence. μ MACS Streptavidin MicroBeads were added, and magnetic isolation was performed. The transcription factor was eluted with high salt Elution Buffer. The Western blot (using a phosphospecific STAT-3 antibody) shows a high amount of pSTAT-3 in the eluate. L: cell lysate; FT: flow-through; W1, W2: wash fractions; E: eluate.

Automated 96-well isolation of biotinylated probes

The **MultiMACS™ Streptavidin Kits** in combination with the MultiMACS M96 Separator simultaneously isolate up to 96 samples in a semi-automated or — in combination with a robotic pipetting system — fully automated process (fig. 3).

Isolation of native transcription factors

The **μ MACS FactorFinder Kit** performs native isolation of DNA-binding proteins and is therefore well-suited to detect and analyze novel transcription factors.

The applications of the kit are as diverse as the questions in transcriptional regulation research: Individual transcription factors and their co-factors can be detected and characterized; DNA-protein interactions and target-sequences can be analyzed (fig. 4).

The kit can also be used to investigate transcription factors as potential therapeutic targets.

Features of the μ MACS FactorFinder Kit

- Unique ready-to-use kit
- One-step extraction of cytosolic and nuclear fraction with special Lysis Buffer
- Less than 90 minutes required for the isolation of functional transcription factors
- Both native or denaturing elution are feasible, depending on downstream application

Product overview

Place your order by fax, phone, or online!

Products	Capacity	Order no.
Isolation of epitope-tagged proteins		
μMACS c-myc Isolation Kit ¹	40 isolations	130-091-123
μMACS Anti-c-myc Starting Kit ²	40 isolations	130-091-284
μMACS His Isolation Kit ¹	40 isolations	130-091-124
μMACS Anti-His Starting Kit ²	40 isolations	130-091-285
μMACS HA Isolation Kit ¹	40 isolations	130-091-122
μMACS Anti-HA Starting Kit ²	40 isolations	130-091-286
μMACS GFP Isolation Kit ¹	40 isolations	130-091-125
μMACS Anti-GFP Starting Kit ²	40 isolations	130-091-288
μMACS GST Isolation Kit ¹	40 isolations	130-091-370
μMACS Anti-GST Starting Kit ²	40 isolations	130-091-493
ProCatch His Resin	10 mL	130-092-184
ProCatch His Resin	25 mL	130-092-183
ProCatch His Resin	100 mL	130-092-182
ProCatch Glutathione Resin	10 mL	130-092-187
ProCatch Glutathione Resin	25 mL	130-092-186
ProCatch Glutathione Resin	100 mL	130-092-185
96-well isolation of epitope-tagged proteins		
MultiMACS c-myc Isolation Kit (12×8) ³	96 isolations	130-094-250
MultiMACS c-myc Isolation Kit (4×96) ⁴	384 isolations	130-094-251
MultiMACS GFP Isolation Kit (12×8) ³	96 isolations	130-094-252
MultiMACS GFP Isolation Kit (4×96) ⁴	384 isolations	130-094-253
MultiMACS GST Isolation Kit (12×8) ³	96 isolations	130-094-254
MultiMACS GST Isolation Kit (4×96) ⁴	384 isolations	130-094-256
MultiMACS HA Isolation Kit (12×8) ³	96 isolations	130-094-255
MultiMACS HA Isolation Kit (4×96) ⁴	384 isolations	130-094-257
MultiMACS His Isolation Kit (12×8) ³	96 isolations	130-094-258
MultiMACS His Isolation Kit (4×96) ⁴	384 isolations	130-094-259

1) Kit contains 2 mL Anti-Tag MicroBeads, Lysis Buffer, Wash Buffer, Elution Buffer.

2) Starting Kit contains 1 μMACS Tag Isolation Kit, 1 μMACS Separator, 1 MACS® MultiStand, 2 × 20 μ Columns.

3) Kit contains 3 × 2 mL μMACS Anti-Tag MicroBeads, Equilibration Buffer, 12 × Multi-8 Columns, 1 MultiColumn Frame, 1 Deep Well Block, 1 Microtiter Plate.

4) Kit contains 5 × 4.6 mL μMACS Anti-Tag MicroBeads, Equilibration Buffer, 4 × Multi-96 Columns, 4 Deep Well Blocks, 4 Microtiter Plates.

Please find contact details on the back cover.



Products	Contents / Components	Capacity	Order no.
Detection of epitope-tagged proteins			
Anti-c-myc-Biotin	1 mL	up to 200 tests	130-092-471
Anti-c-myc-FITC	1 mL	up to 200 tests	130-092-472
Anti-c-myc-HRP	100 µL, suggested dilution range 1:1,000–1:10,000		130-092-113
Anti-His-Biotin	1 mL	up to 100 tests	130-092-692
Anti-His-FITC	1 mL	up to 100 tests	130-092-675
Anti-His-HRP	100 µL, suggested dilution range 1:1,000–1:10,000		130-092-785
Anti-His-HRP (C-terminal)	100 µL, suggested dilution range 1:1,000–1:10,000		130-092-783
Anti-His-PE	1 mL	up to 100 tests	130-092-691
Anti-HA-Biotin	1 mL	up to 100 tests	130-092-258
Anti-HA-FITC	1 mL	up to 100 tests	130-092-256
Anti-HA-HRP	100 µL, suggested dilution range 1:1,000–1:10,000		130-091-972
Anti-HA-PE	1 mL	up to 100 tests	130-092-257
Anti-GFP-HRP	100 µL, suggested dilution range 1:1,000–1:10,000		130-091-833
Immunoprecipitation and ChIP			
µMACS Protein A MicroBeads	2 mL	40 isolations	130-071-001
µMACS Protein G MicroBeads	2 mL	40 isolations	130-071-101
µMACS Protein A/G Starting Kit	2 mL µMACS Protein A or G MicroBeads, 1 µMACS Separator, 20 µ Columns, 1 MACS® Multistand	40 isolations	130-042-601
MultiMACS Protein A Kit (24×8)	5× 2 mL µMACS Protein A MicroBeads; 24 Multi-8 Columns; 2 MultiColumn Frames; 2 Deep Well Blocks, 2.5 mL, with sealing foil; 2 Microtiter Plates, U-bottom	192 isolations	130-092-944
MultiMACS Protein G Kit (24×8)	5× 2 mL µMACS Protein G MicroBeads; 24 Multi-8 Columns; 2 MultiColumn Frames; 2 Deep Well Blocks, 2.5 mL, with sealing foil; 2 Microtiter Plates, U-bottom	192 isolations	130-092-946
MultiMACS Protein A Kit (4×96)	10× 2 mL µMACS Protein A MicroBeads; 4 Multi-96 Columns with MultiColumn Frames; 4 Deep Well Blocks, 2.5 mL, with sealing foil; 4 Microtiter Plates, U-bottom	384 isolations	130-092-945
MultiMACS Protein G Kit (4×96)	10× 2 mL µMACS Protein G MicroBeads; 4 Multi-96 Columns with MultiColumn Frames; 4 Deep Well Blocks, 2.5 mL, with sealing foil; 4 Microtiter Plates, U-bottom	384 isolations	130-092-947

Product overview

Place your order by fax, phone, or online!

Products	Contents / Components	Capacity	Order no.
Isolation via biotinylated molecules or isolation of transcription factors			
μMACS Streptavidin Kit ¹		20 isolations	130-074-101
μMACS Streptavidin Starting Kit ²		20 isolations	130-091-287
MultiMACS Streptavidin Kit (12×8) ³		96 isolations	130-092-948
MultiMACS Streptavidin Kit (4×96) ⁴		384 isolations	130-092-949
μMACS FactorFinder Kit ⁵		20 isolations	130-092-317
μMACS FactorFinder Starting Kit ⁶		20 isolations	130-092-318
MACS Separators and MACS Columns for molecular biology			
μMACS Separation Unit	Compatible with μ Columns		130-042-602
thermoMACS Separation Unit	Compatible with μ Columns		130-091-136
MiniMACS Separation Unit	Compatible with M Columns		130-042-102
OctoMACS Separation Unit	Compatible with M Columns		130-042-109
MultiMACS M96 Separator	Compatible with Multi-8 and Multi-96 Columns		130-091-937
MultiMACS M96thermo Separator	Compatible with Multi-8 and Multi-96 Columns		130-094-534
μ Column	20 columns		130-042-701
M Column	10 columns		130-042-801
Multi-8 Columns, molecular (12×8)	12 Multi-8 Columns, 1 MultiColumn Frame, 1 Deep Well Block, 1 Microtiter Plate		130-092-444
Multi-96 Column, molecular (4×96)	4 Multi-96 Columns with MultiColumn Frames, 4 Deep Well Blocks, 4 Microtiter Plates		130-092-445

1) Kit contains 2 mL μMACS Streptavidin MicroBeads, Equilibration Buffers, 20 μ Columns.

2) Kit contains 1 μMACS Streptavidin Kit, 1 μMACS Separator, 1 MACS Multistand.

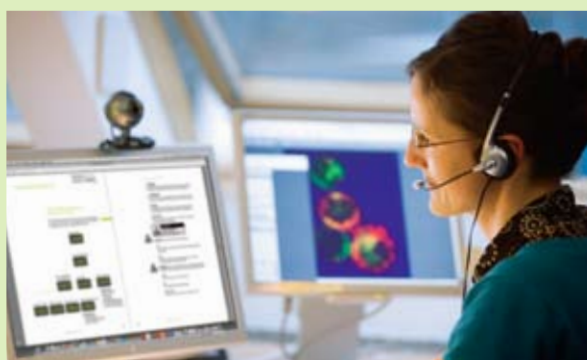
3) Kit contains 5× 2 mL μMACS Streptavidin MicroBeads, Equilibration Buffers, 12 Multi-8 Columns, 1 MultiColumn Frame, 1 Deep Well Block, 1 Microtiter Plate.

4) Kit contains 20× 2 mL μMACS Streptavidin MicroBeads, Equilibration Buffers, 4 Multi-96 Columns, 4 Deep Well Blocks, 4 Microtiter Plates.

5) Kit contains 2 mL μMACS Streptavidin MicroBeads, Lysis, Binding, Wash, and Elution Buffers, Binding Enhancer, 20 μ Columns.

6) Kit contains 1 μMACS FactorFinder Kit, 1 μMACS Separator, 1 MACS Multistand.

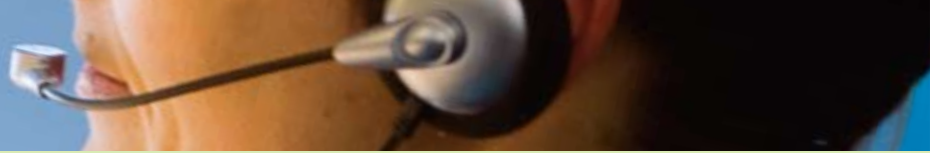
Please find contact details on the back cover.



Support is just a phone call away

For technical questions and establishment of new protocols, please contact Miltenyi Biotec's Technical Support Team. Experienced scientists offer advice ranging from experimental design and sample preparation to automated use of MACS® Technology for protein isolation.

For country-specific contact data, please refer to www.miltenyibiotec.com/support



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