

Montage™ Albumin Deplete Kit



- ▶ Removes >65% of serum albumin
- ▶ Lower non-specific binding than traditional Cibacron Blue
- ▶ Easy, 15-minute protocol
- ▶ Can be used for multiple species without protocol change

The presence of albumin in serum or plasma samples can decrease the resolution of one-dimensional electrophoresis (1DE), two-dimensional electrophoresis (2DE), chromatography, or mass spectrometry systems.

The Montage Albumin Deplete Kit provides a fast, convenient, and reproducible method for improving resolution by reducing albumin levels in serum or plasma samples.

Improve Resolution of Lower Abundance Proteins

The kit's centrifugal columns are pre-packed with an affinity resin that removes >65% of albumin from typical human serum samples. The affinity resin has been specially formulated to bind albumin without binding significant amounts of other serum or plasma proteins. This reduction in albumin levels can improve the detection of lower abundance proteins by subsequent analytical techniques.

Process Samples in Just 15 Minutes

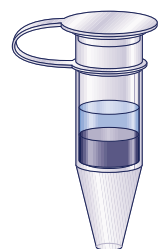
Simply equilibrate the affinity column; add the sample; spin to bind the albumin; wash the column; and collect the eluate. If desired, the bound fraction (albumin and other retained proteins) can be recovered using a stripping solution supplied with the kit.

The kit is optimized for the depletion of human albumin. However, depletion has been demonstrated with other mammalian species including bovine, canine, goat, mouse, rabbit, and rat samples with no protocol changes.

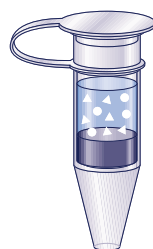
Ensure the Reproducibility of Your Results

Preparing reagents and affinity columns in the lab increases the potential for variability in your results. The Montage Albumin Deplete Kit comes ready-to-use, with prepared reagents and columns. Each lot of kits is QC tested for reproducible albumin depletion and low non-specific binding.

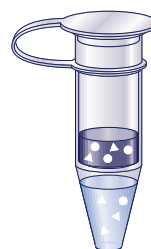
15-Minute Albumin Depletion



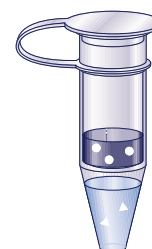
Equilibrate column



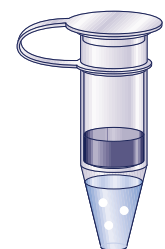
Add sample



Deplete albumin



Wash to reduce non-specific binding



Elute bound fraction (optional)

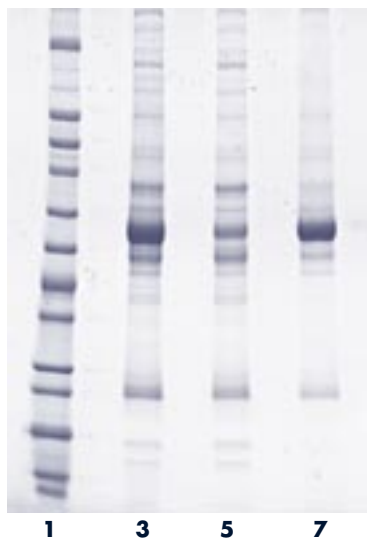
● = Albumin ▲ = Other serum/plasma proteins

Performance

Depletion of Albumin from Human Plasma

Typical Human Albumin Depletion
Measured by Radial Immunodiffusion Assay

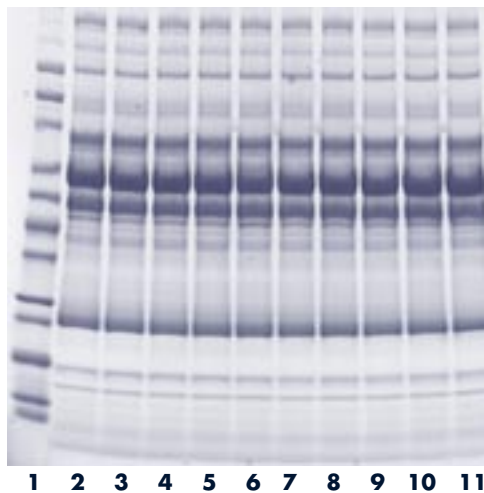
Human Plasma Volume (μL)	Albumin Depletion (%)
20	85
50	75
75	65
100	58



Lane 1: Molecular Weight Markers
Lane 3: Unprocessed Plasma
Lane 5: Flow-through (Albumin-depleted) Plasma
Lane 7: Bound Fraction

Figure 1. Human plasma sample (20 μL) was diluted with 180 μL of equilibration buffer and processed with the Montage Albumin Deplete Kit. Samples of the flow-through and bound fractions were then separated by 1D SDS-PAGE and stained with colloidal Coomassie™ blue. To accurately assess albumin removal, all sample loads were volume normalized to the undepleted starting sample. Radial immunodiffusion assay revealed 85% albumin reduction. Gel densitometry revealed 10% non-specific protein binding to the resin.

Reproducibility



Lane 1: Molecular Weight Markers
Lanes 2-11: Replicates

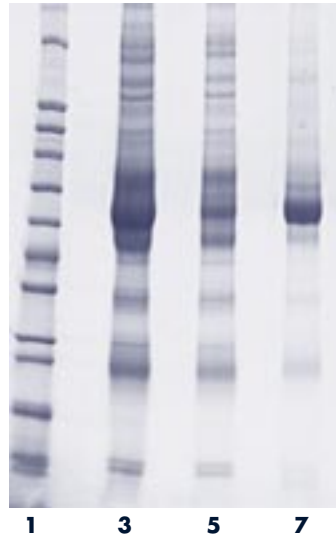
Figure 2. Ten replicates of a human plasma sample (75 μL) were diluted with 125 μL of equilibration buffer and individually processed with the Montage Albumin Deplete Kit. Flow-through (albumin-depleted) fractions were collected; acetone-precipitated to further concentrate the sample; and then resuspended in SDS-PAGE sample buffer. Samples were separated by 1D SDS-PAGE and stained with colloidal Coomassie blue.

Radial immunodetection assay revealed an average of 66% albumin reduction across the 10 separate depletions with a standard deviation of 3.2 and a CV of 2.1%.

Depletion of Albumin from Animal Sera

Typical Animal Albumin Depletion
Measured by Gel Densitometry

Species	Albumin Depletion (%)	Non-Specific Binding (%)
Mouse	42.0	18.7
Rat	65.0	17.8
Bovine	39.0	9.7
Rabbit	46.0	12.1



Rat Serum

- Lane 1:** Molecular Weight Markers
- Lane 3:** Unprocessed Rat Serum
- Lane 5:** Flow-through (Albumin-depleted) Serum
- Lane 7:** Bound Fraction

Figure 3. Plasma samples (75 μ L) from a range of animal species were diluted with 125 μ L equilibration buffer and processed using the Montage Albumin Deplete Kit. Bound material was eluted from the columns using the stripping buffer supplied with the kit and separated by 1D SDS-PAGE.

Two-Dimensional Electrophoresis of Human Plasma

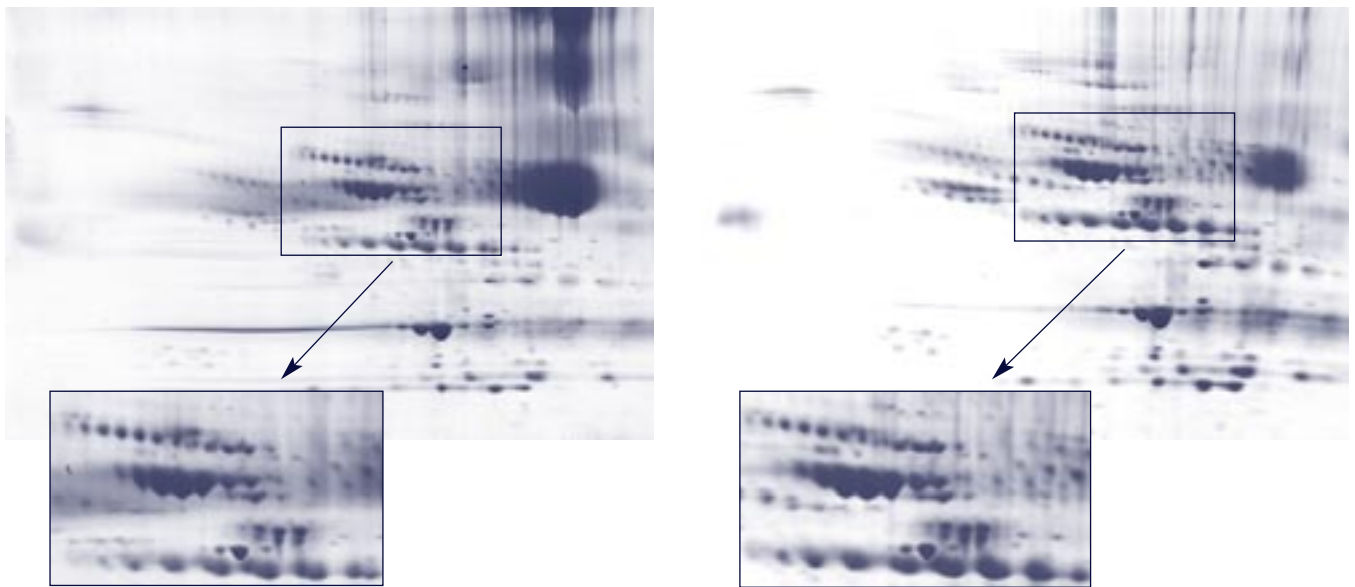


Figure 4. A 20 μ L plasma sample was dissolved in IPG loading buffer and analyzed by 2DE (left). The same plasma sample was then processed using the Montage Albumin Deplete Kit and analyzed (right).

Magnification of selected gel regions demonstrates the increased visualization of lower abundance proteins achieved with the Montage Albumin Deplete Kit.



Specifications

Kit Contents	Affinity columns, micro-centrifuge tubes, buffers, and reagents for processing either 4 or 24 samples
Storage	2 to 8 °C
Resin Volume	200 µL packed bed resin/column
Binding Capacity	
<i>Resin binding capacity:</i>	~ 40 mg of human serum albumin per gram of moist resin under static equilibrium binding conditions
<i>Dynamic binding capacity/column:</i>	Typically 2 mg human serum albumin
<i>Non-specific binding:</i>	Typically < 14% from human serum

Ordering Information

Description	Qty/Pk	Catalogue No.
Montage Albumin Deplete Kit	Process 4 samples	LSKA D00 04
	Process 24 samples	LSKA D00 24

To Place an Order or Receive Technical Assistance

For additional information call your nearest Millipore office:

In the U.S. and Canada, call toll-free **1-800-MILLIPORE (1-800-645-5476)**

In the U.S., Canada and Puerto Rico, fax orders to **1-800-MILLIFX (1-800-645-5439)**

Internet: www.millipore.com

Tech Service:

www.millipore.com/techservice

Millipore Worldwide

AUSTRALIA
Tel. 1 800 222 111
or (02) 9888 8999
Fax (02) 9878 0788

AUSTRIA
Tel. (01) 877 89 26
Fax (01) 877 16 54

BALTIC COUNTRIES
Tel. +358 9 804 5110
Fax +358 9 256 5660

BELGIUM AND LUXEMBOURG
Tel. +32 2 726 88 40
Fax +32 2 726 98 84

BRAZIL
Tel. (011) 5548-7011
Fax (011) 5548-7923

CANADA
Tel. 1-800-645-5476
Fax 1-800-645-5439

CHINA, PEOPLE'S REPUBLIC OF
Beijing:
Tel. (8610) 8519 1250
(8610) 6518 1058
Fax (8610) 8519 1255

Guangzhou:
Tel. (8620) 8755 4049
Fax (8620) 8752 0172

Hong Kong:
Tel. (852) 2803 9111
Fax (852) 2513 0313

Shanghai:
Tel. (8621) 5306 9100
Fax (8621) 5306 0838

CZECH REPUBLIC
Tel. 02-2051 3841
Fax 02-2051 4298

DENMARK
Tel. 70 10 00 23
Fax 70 10 13 14

EASTERN EUROPE, C.I.S., AFRICA, MIDDLE EAST AND GULF
Life Sciences Division:
Tel. +33 3 88 38 9536
Fax +33 3 88 38 9539

BioPharmaceutical Division:
Tel. +43 1 877-8926
Fax +43 1 877-1654

Laboratory Water Division:
Tel. +33 1 30 12 7000
Fax +33 1 30 12 7180

FINLAND
Tel. (09) 804 5110
Fax (09) 256 5660

FRANCE
Tel. 01 30 12 7000
Fax 01 30 12 7180

GERMANY
Tel. (06196) 494-0
Fax (06196) 43901

HUNGARY
Tel. 01 381 0433
01 381 0434
01 209 3232
Fax 01 209 0295

INDIA
Tel. (91) 80-839 46 57
Fax (91) 80-839 63 45

IRELAND
Life Sciences and Laboratory Water Divisions:
Tel. +44 1923 816375
Fax +44 1923 818297
BioPharmaceutical Division:
Tel. (021) 883 666
Fax (021) 883 048

ITALY
Vimodrone (Milano):
Tel. (02) 25.07.81
Fax (02) 26.50.324
Roma:
Tel. (06) 52.03.600
Fax (06) 52.95.735

JAPAN
Tel. (03) 5442-9711
Fax (03) 5442-9736
9736 Life Sciences
9737 BioPharm.
9734 Lab Water

KOREA
Tel. (822) 551-0990
Fax (822) 551-0228

MALAYSIA
Tel. 603-7957-1322
Fax 603-7957-1711

MEXICO
Tel. (525) 576-9688
Fax (525) 576-8706

THE NETHERLANDS
Tel. 076-5022000
Fax 076-5022436

NORWAY
Tel. 22 67 82 53
Fax 22 66 04 60

POLAND
Tel. 22-669 12 25
22-663 70 31
Fax 22-663 70 33

PUERTO RICO
Tel. (787) 273-8495
Fax (787) 747-6553

SINGAPORE
Tel. (65) 842 1822
Fax (65) 842 4988

SPAIN AND PORTUGAL
Tel. +34 917 283 960
Fax +34 917 292 909

SWEDEN
Tel. 08-628 6960
Fax 08-628 6457

SWITZERLAND
Tel. (01) 908-30-60
Fax (01) 908-30-80

TAIWAN
Tel. 886-2-2792-9333
Fax 886-2-2792-6555

U.K.
Tel. 01923 816375
Fax 01923 818297

U.S.A.
Tel. (781) 533-6000
Fax (781) 533-3110

IN ALL OTHER COUNTRIES
Millipore Intertech (U.S.A.)
Tel. +1 (781) 533-8622
Fax +1 (781) 533-8630



Now you can buy Millipore products online @

www.millipore.com/purecommerce

Millipore and Montage are trademarks of Millipore Corporation.

Coomassie is a trademark of BASF Aktiengesellschaft.
Lit. No. PF1770EN00 8/02 02-188

Printed in U.S.A.

© 2002 Millipore Corporation, Bedford, MA.
All rights reserved.

MILLIPORE