

Integrated Biology Solutions

Multiple Affinity Removal System

Charting New Territories in Proteomic Separations

Product Note

The Agilent Multiple Affinity Removal System helps to unlock the potential of the human and mouse serum proteome for biomarker or drug target discovery applications in less than 30 minutes.

Identifying proteins or peptides from human/mouse serum and plasma samples is challenging because targets of most interest are often masked by high-abundance proteins of limited interest.

The system's unique liquid chromatography-style columns and method enable automated sample preparation, allowing you to remove multiple targeted high-abundance proteins simultaneously.

The Multiple Affinity Removal System is comprised of an individual LC column (High-Capacity or Standard) and optimized buffers designed to remove greater than 98%–99% of six interfering high-abundance proteins (albumin, IgG, IgA, transferrin, haptoglobin, and antitrypsin) from human serum* or three proteins (albumin, IgG, and transferrin) from mouse serum samples.

* Human protein removal columns are not recommended for mouse serum and vice versa. Capacities of the columns for other species may vary and injected sample sizes should be adjusted accordingly.

Features at a Glance

With the Agilent Multiple Affinity Removal System, you can:

- **Simultaneously remove six (human) or three (mouse) unwanted, highly abundant proteins.** This eliminates the masking effect of highly abundant proteins in serum, plasma, or CSF samples so that you can easily detect lower-abundant proteins and peptides.
- **Get twice the loading capacity** with the Hu6-HC in the same column formats as the Hu-6.
- **Process large amounts of plasma** with columns that can be re-used for at least 200 injections.
- **Minimize sample loss** by using a single column.
- **Increases detection limits** of protein separation methods such as 1DGE, 2DGE and LC/MS.
- **Minimize non-specific protein binding** without sacrificing efficiency.



Agilent Technologies

Six highly abundant proteins removed from human serum* simultaneously for unmatched efficiency (Hu-6 and Hu6-HC):

- Albumin
- IgG
- Antitrypsin
- IgA
- Transferrin
- Haptoglobin

*Appropriate for monkey serum

Three highly abundant proteins removed from mouse serum* by the Ms-3 column:

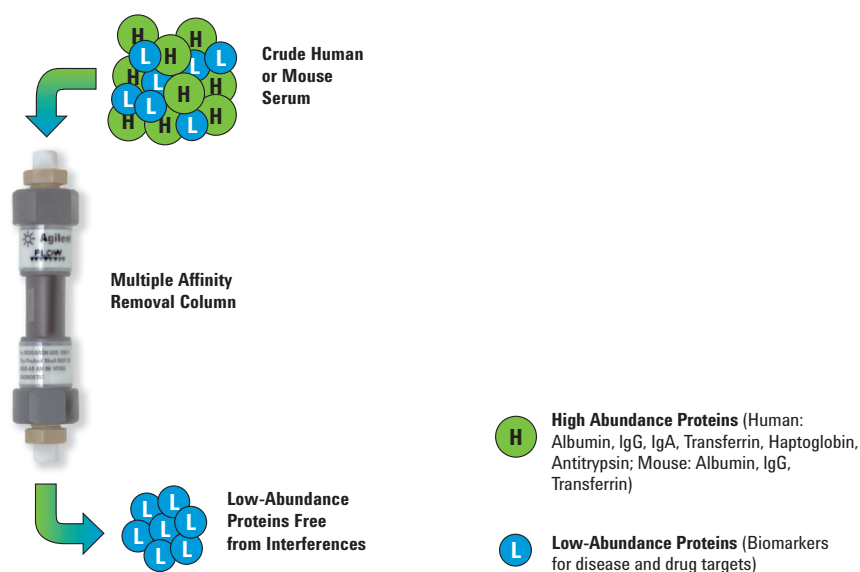
- Albumin
- IgG
- Transferrin appropriate for rat serum

* Appropriate for rat serum

These proteins cover 80 to 90 percent of total serum protein mass. Removing them **allows you to load up to 10 times more low-abundance protein mass** onto gels or LC/MS for analysis.

Automated, Integrated Solution for Ease of Use

The Multiple Affinity Removal System works with any standard LC or HPLC system. For an efficient system that gives you optimum performance, combine it with the Agilent 1100 Series LC, Agilent autosampler, and Agilent software. The result is an automated, integrated system that increases ease of use, speeds analysis time, and reduces experimental costs.



Ordering Information

Product number	Description	Species	Capacity/Injection*
5185-5984	Multiple Affinity Column, 4.6 × 50 mm Hu-6	Human	15–20 µL
5188-5332	Multiple Affinity Column, 4.6 × 50 mm Hu6-HC	Human	30–40 µL
5185-5985	Multiple Affinity Column, 4.6 × 100 mm Hu-6	Human	30–40 µL
5188-5333	Multiple Affinity Column, 4.6 × 100 mm Hu6-HC	Human	6–80 µL
5188-5336	Multiple Affinity Column, 10 × 100 mm Hu6-HC	Human	>340 µL
5188-5217	Multiple Affinity Column, 4.6 × 50 mm Ms-3	Mouse	37–50 µL
5188-5218	Multiple Affinity Column, 4.6 × 100 mm Ms-3	Mouse	75–100 µL

Inquire at
affinity_removal@agilent.com

Larger Multiple Affinity Removal Columns

* Order Starter Reagent Kit or Buffers A and B when purchasing a column. Columns should only be used with Buffers A and B. Human protein removal columns are not recommended for mouse serum and vice versa. Capacities for various mouse strains can vary.

Accessories Ordering Information

Product number	Description
5185-5986	Starter Reagent Kit Includes: 2 bottles Buffer A, 1 bottle Buffer B, 2 packs of 25 spin filters, 1 pack of 25 spin concentrators
5185-5987	Buffer A, 1 L for loading, washing, equilibrating
5185-5988	Buffer B, 1 L for eluting
5185-5989	Human Serum Albumin dilute standard (1 mL, 20 mg/mL)
5185-5990	Spin filters, 0.22 µm for sample pre-cleanup, cellulose acetate, 25/pk
5185-5991	Spin concentrators, 5K MWCO, 4 mL, to concentrate proteins, 25/pk
5185-5995	Replacement PEEK fritted end-fittings, 1 each

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About Agilent's Integrated Biology Solutions

Agilent Technologies is a leading supplier of life science research systems that enable scientists to understand complex biological processes, determine disease mechanisms and speed drug discovery. Engineered for sensitivity, reproducibility and workflow productivity, Agilent's integrated biology solutions include instrumentation, microfluidics, software, microarrays, consumables and services for genomics, proteomics and metabolomics applications.

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Printed in the U.S.A.
January 24, 2006
5989-1627EN

