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AlbuSorb™

Albumin Depletion From Serum or Plasma

- Removes 30 mg albumin/ml, >90%
- Affinity-type equivalence, virtually no cross-reactivity with other proteins
- Disposable, no column regeneration or cross-contamination
- Economical new surface technology, not based on blue-dye or immuno-affinity chromatography
- Mild binding conditions maintains tertiary structure and simple transfer to secondary analysis
- The flow-through (unbound) fractions retain their enzymatic and biological activity
- Removes albumin from most species including human, sheep, bovine, mouse, goat, rat, and calf.

Poly-electrolytes are polymers with repeating units of stationary charges. AlbuSorb™ comes from a class of solid-phase, or surface-based, elastomeric poly-electrolytic surfaces that bind proteins through an empirically derived chemistry combining elements of polymer composition, cross-linking architecture and charge properties. As with bio-polymers like DNA and Heparin, governing their reactivity is the spatial presentation of the electrostatic groups along a flexible polymer chain.

Unlike immuno-affinity, the surfaces utilized are disposable eliminating cycle to cycle variance and cross-contamination. AlbuSorb™ is supplied as a powder. Simply weigh, centrifuge and/or filter, and recover the albumin depleted serum in the supernatant.

Cancer Sera Before and After AlbuSorb™

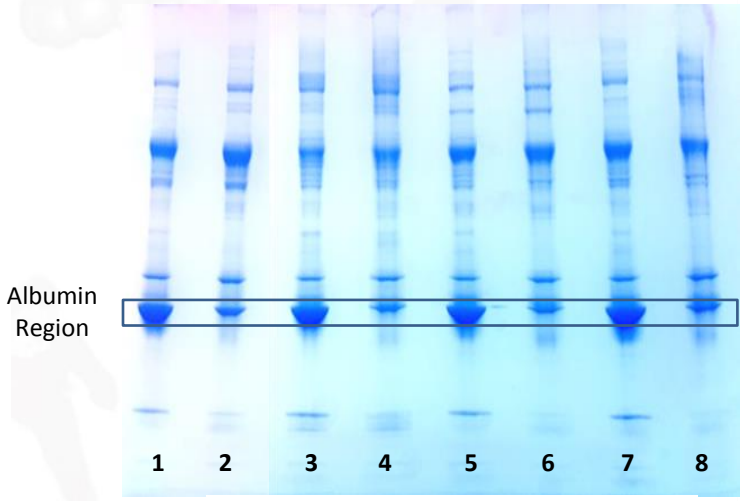
1: Normal pooled serum control
2: Flow-through from normal serum

3: Breast cancer pooled serum control
4: Flow-through from breast cancer serum

5: Lung cancer pooled serum control
6: Flow-through from lung cancer serum

7: Pancreatic cancer pooled serum control
8: Flow-through from pancreatic cancer serum

Note: All samples are from human female ages 40-60



Gel Image: SDS-PAGE non-reduced, Criterion™ Tris.HCl (Bio-Rad) 4-15%

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Product	Size	# Serum Preps	Item No.
AlbuSorb™	1 gram	20, 25 µl Serum Samples	A185-1
AlbuSorb™	6 grams	120, 25 µl Serum Samples	A185-6

Items	Item No	Item No	Reagent
AlbuSorb™	A185-1 (1 grams)	A185-6 (6 grams)	Supplied
Binding Buffer BB1, pH 7.5	30 ml	180 ml	Supplied

SELECTIVE BINDING WORKFLOW

Typical Performance	AlbuSorb™	AlbuSorb™ PLUS
Serum Sample Volume	25 µl	25 µl
Albumin Removal	>90%	>85%
Immunoglobulin Removal	-	>85%
Recovered Protein Mass	500-600 µg (Albumin depleted)	400-500 µg (Albumin + Ig depleted)
LC-MS/MS unique proteins (single 3 hr gradient)	350-400	350-400

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AlbuSorb™ Applications

Sample Type	Disease	Analysis
Rat serum	Cancer	MALDI
Rat serum	Diabetes	Western Blot
Human Synovial fluid	Rheumatoid Arthritis	2DE
Human Urine Exosomes	Diabetes	LC-MS/MS SRM

PROTOCOL – Based on processing 25 µl Serum

For best results – the lysate should be clear and free of colloidal material. We recommend first filtering through a 0.45 µm syringe-type filter before beginning the prep.

1. Weigh out 50 mg of AlbuSorb™ powder in a spin-tube/microfuge tube.

2. Add 400 µl of **Binding Buffer BB1** to condition the AlbuSorb™ powder. Shake it manually/ vortex for 3 min and then centrifuge for 2 minutes at 3000 rpm. Discard the supernatant.

3. Repeat step-2

4. As a requirement for albumin binding, add 250 µl of the **BB1 Buffer** and then add 25 µl of the serum to **Step 3**. Mix for 10 minutes on a rotating shaker.

5. Centrifuge for 4 minutes at 10,000 rpm, **supernatant contains serum proteins minus albumin. Note – when observing proteins on SDS-PAGE (4-15%), other proteins migrate to the same region as Albumin, and may not be fully resolved.**

6. Optionally the pellet **(mostly albumin)** can be eluted with 200 µl of **stripping buffer (0.2M Tris + 0.5M NaCl, pH 10 by mixing on a shaker for 10 min)** and centrifuge for 4 minutes at 10,000 rpm.

The protocol can be scaled up or down proportionally to adjust for different serum volumes. The surface amount can be adjusted to accommodate more or less albumin removal.

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