

# **AlbuVoid™ Albumin Depletion Kit**

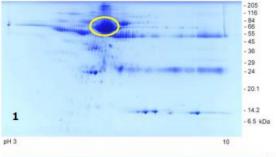
## Albumin Depletion Plus Low Abundance Serum Protein Enrichment

- Albumin voids in flow-through >95%, with <30 minute bind/wash/elute protocol
- Low abundance enrichment equivalent or better than hexa-peptides or antibodies
- Disposable, cost-effective, no column regeneration or cross-contamination
- Mild elution maintains tertiary structure and simple transfer to secondary analysis
- The eluted fractions retain their enzymatic and biological activity
- Removes albumin from many species including human, sheep, bovine, goat, rat, and calf.

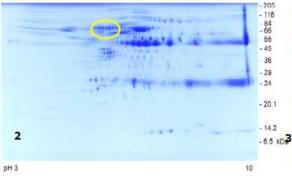
AlbuVoid<sup>TM</sup> is a albumin depletion reagent kit. It removes albumin from serum and plasma samples while concentrating low abundance, and/or low molecular weight proteins. The AlbuVoid<sup>TM</sup> protocol uses mild buffers; the protocol conditions are so gentle that native enzyme activity is retained in elution fractions. AlbuVoid<sup>TM</sup> considerably enhances resolution of proteins below 50 kD, a limitation of alternate enrichment protocols.

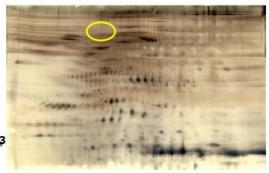
AlbuVoid does not bind albumin. All other proteins(except albumin) in the sample binds to AlbuVoid and then you can elute off all the proteins minus the albumin. Resulting in low abundance serum protein enrichment. It is ideal for applications involving biomarker discovery, enzyme assays, toxicological studies for new drugs, protein profiling using SELDI analysis, protein array pixelation ,1D and 2D gel electrophoresis, LC/MS, and MALDI-TOF MS and cytokines research.

AlbuVoid<sup>™</sup> derives from a silica-based library of individual mixed-mode polymeric ligands. The library was designed to facilitate weak binding of proteins, allowing for rapid elution from the matrix without any foreknowledge of the variety of proteins contained in the starting sample. Because of its specific binding properties, AlbuVoid<sup>™</sup> depletes high abundance proteins in serum like albumin while improving the resolution of less abundant serum proteins.

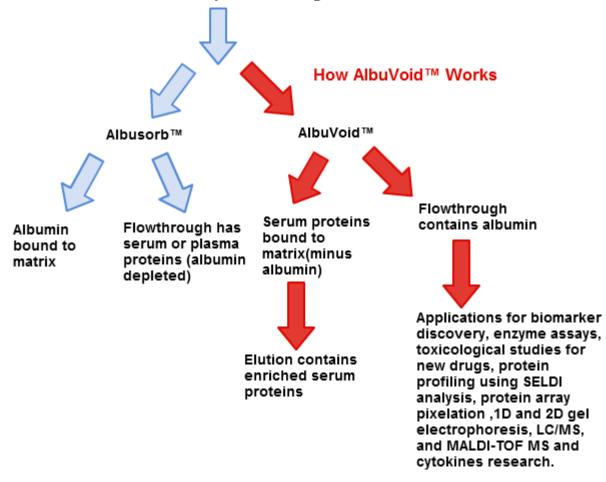


Two-dimensional Gel Electrophoresis Analysis of AlbuVoid™ treated sheep serum. Samples were reduced, alkylated and protein normalized (176 µg total protein per gel). Second dimension was on 8-16% polyacrylamide gels. Gels 1 & 2 were stained with Coomassie. The circled regions indicate the albumin zone. Gel 1: Sheep serum sample. Gel 2: AlbuVoid™ Eluate. Gel 3: Same as 2 - AlbuVoid™ Eluate but restained with SilverQuest (Invitrogen) silver stain. The differences between the gels illustrate the efficiency of albumin removal. The vast majority of the other serum proteins are retained, with no intrinsic bias with respect to molecular weight or pI.





# Serum or Plasma sample containing albumin



Product	Size	# of samples processed	Item No.	2012 Price
AlbuVoid™	10 Preps	10, 200 µl of Serum Sample	AVK-10	\$245
AlbuVoid™	50 Preps	50, 200 µl of Serum Sample	AVK-50	\$795
Note: Please				

Items Required	10 Prep	50 Prep	Reagent
AlbuVoid™	0.5 gram	2.5 grams	Supplied
Binding Buffer AVBB, PH 6.0	12 ml	60 ml	Supplied
Wash Buffer AVWB, PH 7.0	12 ml	60 ml	Supplied
Elution Buffer AVEB, PH 9.8	12 ml	60 ml	Supplied
SpinX Centrifuge tube filters	10	-	Supplied

## PROTOCOL - Based on processing 100-200 µl Serum

- 1. Weigh out 50 mg of **AlbuVoid™** matrix in a spin-tube (0.45µ SpinX centrifuge tube filter from Corning).
- $2.Add\ 250\ \mu l$  of **Binding Buffer AVBB**. Vortex for 5 minutes at room temperature followed by centrifugation at 3000 rpm. Discard the supernatant.
- 3.Repeat step-2
- 4.Condition by adding 200  $\mu$ l of **AVBB** and 200  $\mu$ l of the **Serum.** Vortex for 10 min and then centrifuge for 2 minutes at 5000 rpm.
- 5. Remove the soup as Flow-Through **FT**.
- 6. To the pellet add 350  $\mu$ l of **Wash Buffer AVWB.** Vortex for 5 min and centrifuge for 2 minutes at 5000 rpm. Remove the soup as **Wash.**
- 7. Repeat Step-6.
- 8. To the pellet add 400  $\mu$ l of **Elution Buffer AVEB.** Vortex for 10 min and centrifuge for 2 minutes at 5000 rpm. Remove the soup as **Elution.**
- 9. Read at 280nm using a spectrophotometer.

#### Note:

- 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.
- We have 0.45µ SpinX centrifuge tube filters. If required can be ordered separately.

### **References:**

Gentaur Molecular Products Voortstraat 49 1910 Kampenhout, Belgium