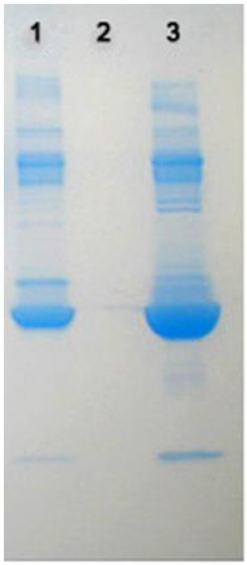
BIOTECH SUPPORT GROUP

NuGel™ BindPro™

Aqueous Protein Crash & Enrichment of Metabolites/Analytes From Serum or Plasma

- Serum and plasma protein removal, >95%
- Ammonium Acetate buffer system, simplifies analyte concentration
- Aqueous Protein Crash, linearly scalable, unlike chemical precipitation or membrane filtration.
- Fast process, less than 30 minutes from application to separation
- Applicable for drug binding/screening, target analytes and metabolomics
- Species agnostic; tested species include human, mouse, sheep, bovine, goat, rat, and calf
- Dry powder format, compatible with high throughput systems such as 96 well plate.
- **NuGel™ BindPro™** supplied as a dry powder reagent; related product - **BindPro™** supplied as a suspension reagent

BindPro™ is an umbrella trademark for polymeric reagents designed as alternatives to ultra-filtration and solvent precipitation for applications that require protein removal and/or concentration in a more versatile or scalable format. **NuGel™ BindPro™** is engineered onto a bead format, based on passivated porous silica (the **NuGel™** platform) covalently bound to elastomeric poly-electrolytes.



Lane 1: Plasma Control

Lane 2: Plasma after treatment with **BindPro™**. Protein bands are not present indicating quantitative protein binding to the **BindPro™** surface.

Lane 3: Eluent from **BindPro™**. If necessary, proteins bound can be recovered from **BindPro™**.

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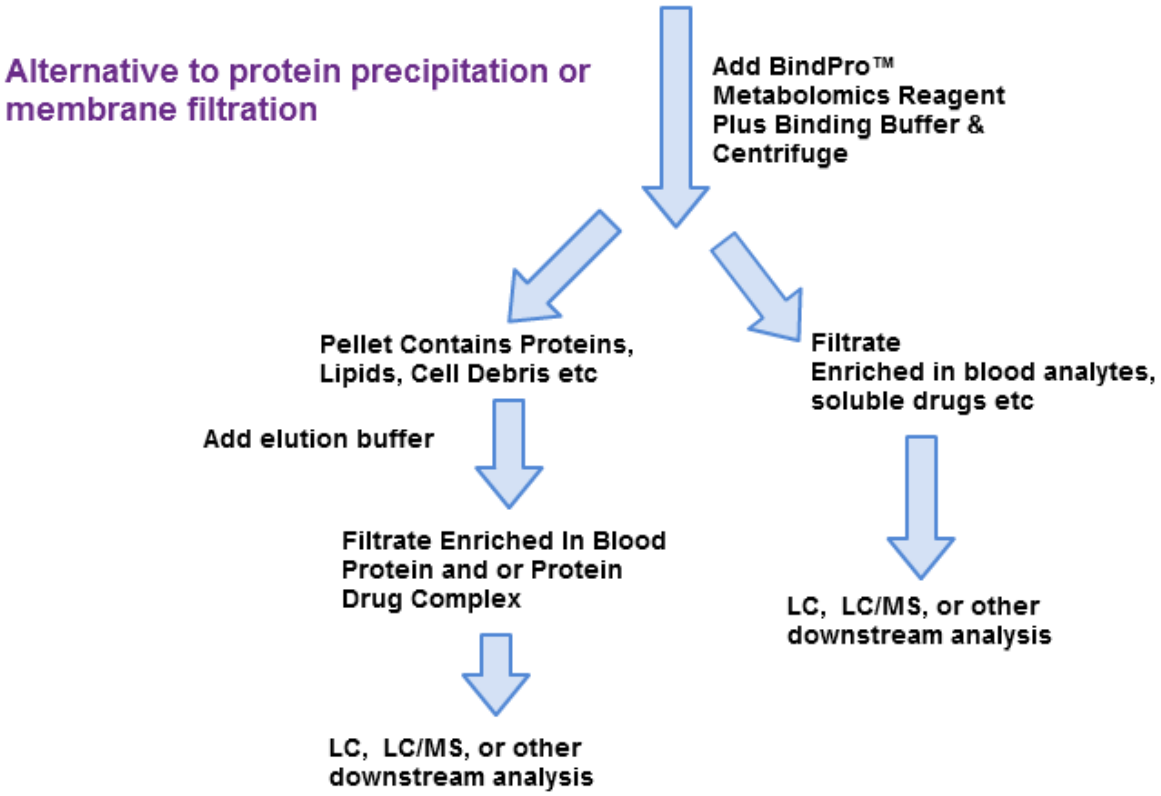

Protein Removal Per Prep	Removal
BSA, 1 to 2 mg	>95%
Plasma or Serum 1 to 2 mg	>95%

Product	Size	# of Samples & Sample Size*	Item No.
NuGel™ BindPro™	15 Preps	15 preps, 20-30 µl of serum	BPM55-15
NuGel™ BindPro™	50 prep	50 preps, 20-30 µl of serum	BPM55-50

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Items Required	15 prep	50 Prep	Item
NuGel™ BindPro™	0.75 grams	2.5 grams	**Supplied**
Binding Buffer BPMBB, Ammonium Acetate, pH 5.0	8.0 ml	25 ml	**Supplied**
SpinX Centrifuge tube filters	15	50	**Supplied**

PROTOCOL – Based on processing 20-30 µl Serum or Plasma Sample. (Designed to remove 1-2 mg of total protein per prep)

1. Weigh out 50 mg of **NuGel™ BindPro™** matrix in a spin-tube.

2. Add 200 µl of **Binding Buffer BPMBB.** Vortex or mix well for 5 minutes at room temperature followed by centrifugation at 10,000 rpm. Discard the flow through.

3. Add 200 µl **Binding Buffer BPMBB** and 25 µl of the serum or plasma sample to spin tube**.** Vortex for 10 min and then centrifuge for 4 minutes at 10,000 rpm.

5. Remove the filtrate as Flow-Through **FT**.

6. This FT is now ready for further analysis. **The supernatant contains analytes with >95% serum protein removal, and is ready for concentration or further analysis.**

7. Optionally the pellet 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.

References

Lipoproteins

Turner, Joseph D., R. Stuart Langley, Kelly L. Johnston, Katrin Gentil, Louise Ford, Bo Wu, Maia Graham et al. "Wolbachia lipoprotein stimulates innate and adaptive immunity through Toll-like receptors 2 and 6 to induce disease manifestations of filariasis." Journal of Biological Chemistry 284, no. 33 (2009): 22364-22378.

Patent

Bhogal, John, Shridhara Alva Karinka, Timothy P. Henning, David Cunningham, Udo Hoss, Andrew H. Naegeli, and John Latour. "Methods of Collecting and Analyzing Samples." U.S. Patent 20,120,296,189, issued November 22, 2012.

CONTACT US

We welcome your questions and comments regarding our products.

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