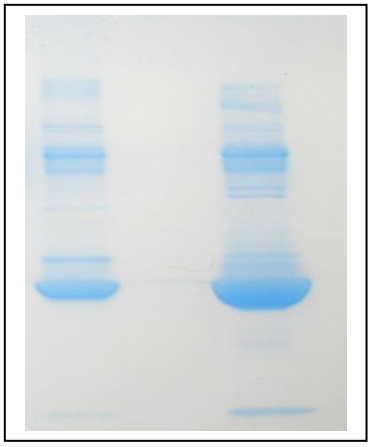
BIOTECH SUPPORT GROUP

BindPro™

Aqueous Protein Crash & Enrichment of Metabolites/Analytes

- Serum and plasma protein removal, >95%
- Aqueous buffer system, simplifies soluble analyte enrichment
- Aqueous Protein Crash, linearly scalable, unlike chemical precipitation or membrane filtration.
- Applicable for drug binding/screening, target analytes and metabolomics
- Protein removal is species agnostic; sera tested includes human, mouse, sheep, bovine, goat, rat
- **BindPro™** supplied as a suspension reagent; related product – **NuGel™ BindPro™** supplied as a dry powder reagent

BindPro™ is a polymeric protein removal suspension reagent. It is designed as an alternative to ultrafiltration for applications that require a more versatile or scaleable format. **BindPro™** also can be used in lieu of solvents for drug binding studies, especially useful for analytes that are water soluble. Consequently, **BindPro™** has applications in a range of drug binding, target analytes, and metabolomic investigations. If desired, proteins can be recovered from **BindPro™** under moderately alkaline conditions.



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™.

Performance Characteristics

Protein	BindPro™: Sample	Removal
BSA, PBS @ 30 mg/ml	1 : 1	>99%
BSA, 1%SDS @ 30 mg/ml	1 : 1	>99%
BSA, 3M GuSCN @ 30 mg/ml	1 : 1	>99%
Human Serum	2 : 1	>95%

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Product	Size	# of Samples & Sample Size*	Item No.
BindPro™	15 ml	75, 100µl Serum Samples	BP355-15
BindPro™	50 ml	250, 100µl Serum Samples	BP355-50

PROTOCOL (volumes can be proportioned to any starting volume)

1. Resuspend BindPro™ by shaking well prior to use. The suspension is best dispensed using wide bore pipette tips.
2. For serum use, add 2 ml of BindPro™ to 1 ml of serum (2:1 volume ratio). For other samples, use guidelines above and adjust ratio to sample protein concentration.
3. Gently mix by inversion for 10 minutes at room temperature.
4. Centrifuge sample at 10,000 x g for 5 minutes or microfuge at 16,000 x g for 5 minutes.

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

References

Lipoproteins

Turner JD, Langley RS, Johnston KL. Wolbachia Lipoprotein Stimulates Innate and Adaptive Immunity through Toll-like Receptors 2 and 6 to Induce Disease Manifestations of Filariasis The Journal of Biological Chemistry.2009;284:22364-22378.

Wolbachia endosymbiotic bacteria have been implicated in the inflammatory pathogenesis of filariasis. Inflammation induced by *Brugia malayi* female worm extract (BMFE) is dependent on Toll-like receptors 2 and 6 (TLR2/6) with only a partial requirement for TLR1. Removal of *Wolbachia*, lipids, or proteins eliminates all inflammatory activity. The article states "To determine if TLR2/6 ligands of *Wolbachia* are lipoproteins, we treated the filarial extracts with **Cleanascite™**, which selectively removes lipids and lipoproteins, or with **BindPro™**, a polymeric protein removal suspension reagent (Biotech Support Group). Both treatments completely ablated (to background levels) HEK-TLR2 cell IL-8 reporter gene activity to BMFE (Fig. 1*C*) thereby showing that the TLR2/6 activity depends on both lipid and protein moieties." The authors conclude that *Wolbachia* lipoproteins drive interferon-dependent $CD4^+$ T cell polarization and antibody switching.

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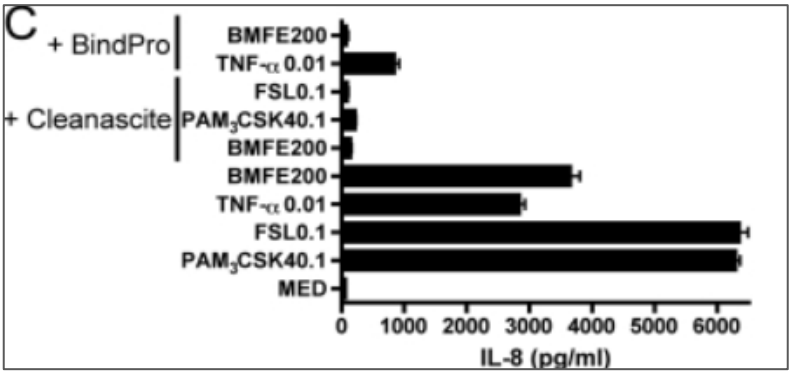

The inflammatory stimuli of BMFE are lipoproteins that primarily signal via TLR2/6. C. triplicate HEK-TLR2 cultures were stimulated with BMFE or control stimuli (doses stated are micrograms/ml) before or following **Cleanascite™** or **BindPro™** treatment. Data plotted are mean IL-8 ± 1S.E.

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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