

For the first time, Thermo Scientific Sera-Mag® SpeedBeads™ Streptavidin-Blocked magnetic particles use a non-surfactant, non-protein blocking reagent. This product features a blocked magnetic streptavidin bead with low non-specific binding (NSB) and high binding capacity for biotinylated target molecules.

Thermo Scientific Sera-Mag SpeedBeads Streptavidin-Blocked

Quick and Easy Steps for Sample Preparation using Sera-Mag Magnetic SpeedBeads Streptavidin-Blocked

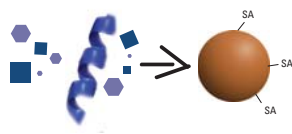
1 Lyse Cells and Target Ligand

Cells are broken open to release components of cell.



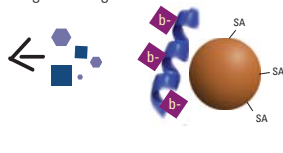
2 Binding Biotin

Add biotinylated capture probe followed by the blocked bead.



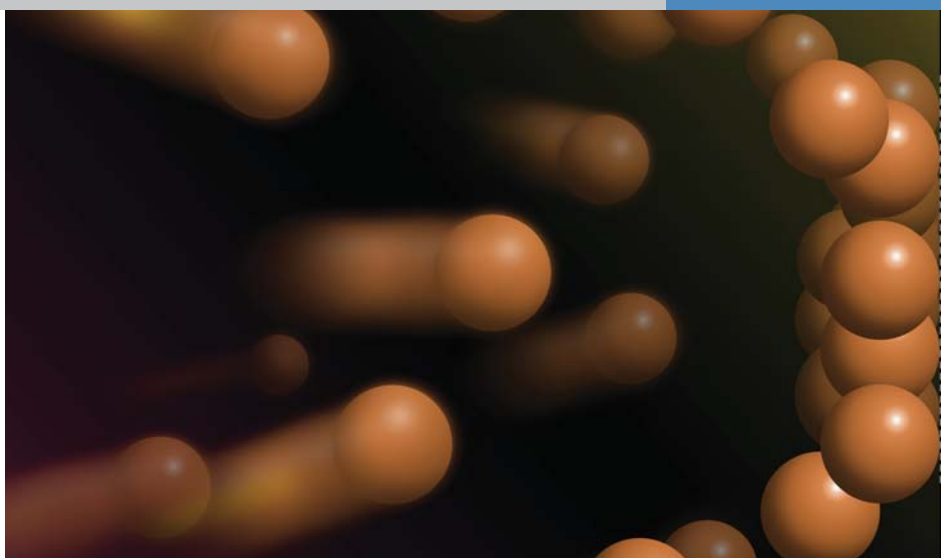
3 Debris Removal

Wash unwanted material. Targeted b-ligand is isolated.



4 Purify Sample

Washing sample in elution buffer results in a quick and clean sample prep for application.



Product Description. Thermo Scientific Sera-Mag® SpeedBeads™ Streptavidin-Blocked particles are uniform, colloiddally stable, monodispersed, non-porous, superparamagnetic beads made by a proprietary core-shell method. The core is a carboxylate-modified particle made by free radical emulsion polymerization of styrene and acid monomer. Magnetite (Fe_3O_4) is coated onto this core particle and then encapsulated with proprietary polymers. Finally, the surface is blocked with a proprietary, non-protein based method, to help prevent non-specific binding of proteins.

Sera-Mag SpeedBeads Blocked Streptavidin particles are stable, nominal 1 μm particles with highly active streptavidin covalently bound to the surface. The particles are supplied at approximately 1% solids (10 mg/mL) in 0.05% sodium azide water solution.

Applications. Automated immunoassays, Immunoprecipitation (Isolation of Target Proteins), and protein purification.

Advantages. Very low Non-Specific Binding.

Beads use a non-surfactant, non-protein blocking reagent.

Quick magnetic response time.

High binding capacity

Consistent performance from lot-to-lot.

Very slow settling rate in the absence of a magnetic field

Benefits. Low Non-Specific Binding aids in capturing a clean sample when preparing your application.

Eliminates need for protein-based blockers, which can interfere with downstream applications.

Greater target isolation of proteins with fewer beads.

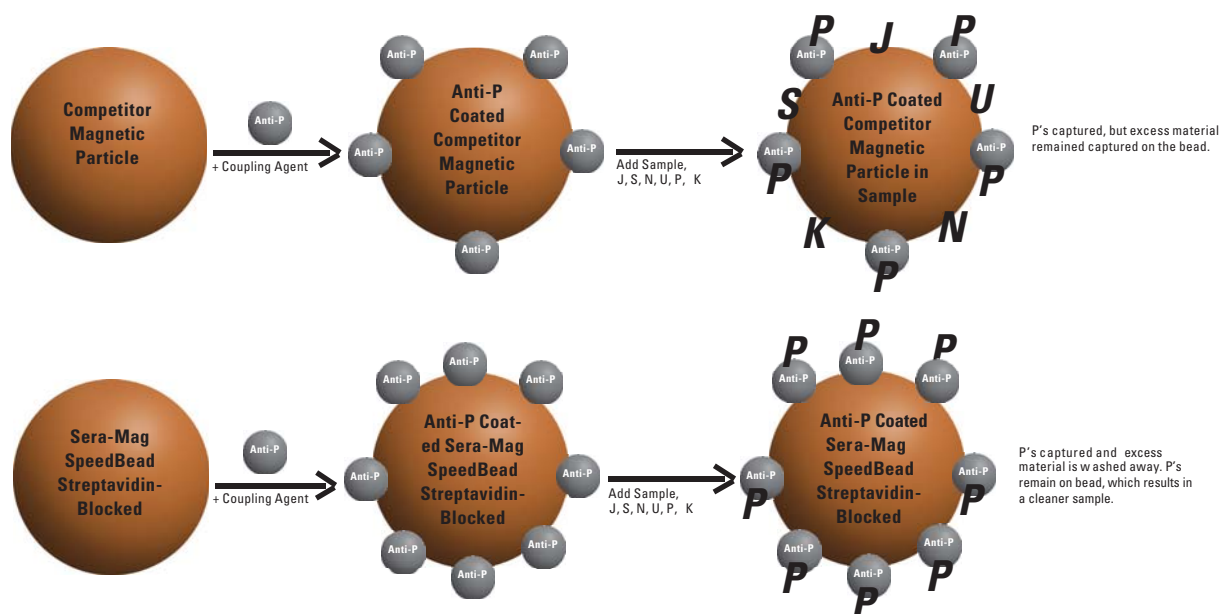
The slow settling rate of the beads allows for more even interaction throughout the sample

Thermo Scientific Sera-Mag SpeedBeads Streptavidin-Blocked Magnetic Particles

Product Attributes

Catalog Number	2115-2104-011150 (1 mL)	2115-2104-010150 (5 mL)	2115-2104-010350 (100 mL)
Particle Composition	Polystyrene core particle encapsulated in magnetite, covalently coated with Streptavidin		
Physical Properties	Excellent chemical stability in several different solutions. Compatible with additives such as preservatives, buffers and stabilizers. They can be diluted in alcohol-water mixtures, acids (to about pH 1), bases (to pH 12).		
Particle Size	1 µm Nominal Diameter		
Concentration	The particles are supplied at approximately 1% solids (10 mg/mL)		
Particle Density	~2 g/cm ³ density		
Fill Volume	1 mL, 5 mL and 100 mL bottles		
Magnetite Content	Particle has a magnetite (Fe ₃ O ₄) content of 60% (w/w), which is approximately 50% higher compared to our original Sera-Mag Magnetic Streptavidin bead formulation. This provides an optimal balance between the particle density, colloidal stability and magnetic response time.		
Preservative	0.05% Sodium Azide		
Biotin Binding Capacity	Biotin binding capacity is proportional to the amount of covalently bound streptavidin (SA) on the surface of the particles. The activity of bound SA is measured by the binding of biotinylated fluorescein (BF). Quantitative amounts of BF in the supernatant are measured with a fluorometer after incubating with and without Sera-Mag SpeedBeads Blocked Streptavidin particles present. These BF measurements are used to calculate the biotin-binding capacity. Biotin-binding capacity is reported in picomoles of biotin per milligram of particle (pmol/mg).		
Package Includes	Certificate of Analysis and Package Insert		
Storage & Handling	Store at 2-8°C. Do not freeze. If particles have settled, re-suspend by vortexing, rolling, shaking, or sonicating.		

The figure below shows the difference between a competitor's magnetic particle and a Sera-Mag SpeedBead Streptavidin-Blocked particle. The competitor's particle has high Non-Specific Binding (NSB), which causes poor sensitivity, signal loss and false positive results. The Sera-Mag SpeedBead Streptavidin-Blocked bead is able to significantly reduce undesired adsorption of proteins from a sample matrix



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