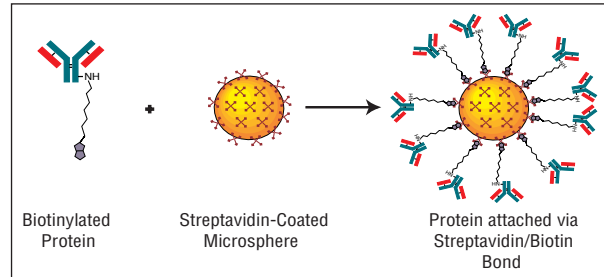


# Affinity Binding

## Coated Polymer, Silica, & Magnetic Microspheres for affinity binding applications.

When circumstances call for the rapid development of microsphere reagents, particles coated with affinity binding proteins and ligands offer a ready solution. Affinity binding protocols are straightforward, typically involving a simple incubation of the spheres with the appropriate ligand. Binding proteins also provide an opportunity to optimally orient the ligand, as with the end-point immobilization of biotinylated oligonucleotides to streptavidin-coated microspheres, or the Fc-specific immobilization of antibodies via Protein A or G.



*Streptavidin allows facile binding of biotinylated ligand.*

Microspheres coated with binding proteins also find significant use in purifications. Streptavidin-coated microspheres are often used in the isolation of biotinylated PCR amplicons. Protein A and Protein G microspheres are utilized for purification of antibodies and Fc-tagged fusion proteins, as well as for the recovery of Ab / Ag complexes in immunoprecipitation.

Magnetic microparticles such as BioMag® can be used with the added benefits of much greater surface area, higher binding capacities, and efficient capture of target with the conservative use of particles.

### Streptavidin

Our streptavidin-coated microspheres offer simple and extremely stable binding of biotinylated molecules such as antibodies, peptides, and oligonucleotides for use in diagnostics, screening, and affinity purification.

### Biotin

The avidin / biotin interaction is one of the strongest non-covalent bonds ( $K_a = 10^{15} / M$  vs  $10^7 - 10^{11} / M$  for antibody-antigen interactions). This secure bond, combined with the small size of biotin (MW = 244.3), yields an ideal system for affinity binding, with numerous applications in areas such as immunology and cell /molecular biology.

Our biotin-coated microspheres have been fully characterized in terms of their ability to bind free avidin and therefore will require minimal optimization when determining the correct concentration of ligand to be bound.

### Proteins A & G

Protein A and Protein G readily bind the Fc regions of many IgG isotypes. For this reason, they are used extensively for affinity purification of antibodies from serum or cell culture supernatant, and for capture of immunoprecipitated protein complexes. When Protein A and Protein G microspheres are used as reagents in tests and assays, the immobilized antibodies may be crosslinked to the Protein A- and Protein G-coated support for long-term stability.

### Lectins

Lectins, including Concanavalin A and Wheat Germ Agglutinin have specific sugar binding partners that can be exploited for the immobilization of saccharides, which commonly lack functional groups needed for covalent binding, and for the capture of glycans and glycoproteins.

## Secondary Antibodies

Secondary antibody-coated microspheres are well-suited for many applications where streptavidin or Proteins A and G are not ideal. These have been used in immunoassay and cell separation applications, as well as the capture of immune complexes for immunoprecipitation and antibody-labeled cells for indirect cell separation. Secondary antibody coatings also provide a convenient method for binding specific primary antibodies.

## Unlimited Possibilities

With an expansive range of affinity ligand-coated microspheres, we probably have a product that is suitable for your application. And if we don't, we would be glad to discuss with you our capabilities for customization.

### AFFINITY LIGAND PRODUCTS

Cat. #	Product Description
CME0101	Magnetic Polymer • Streptavidin
UMC0100-UMC0102	COMPEL • Streptavidin
CP01000 - CP01008	Polymer • Streptavidin
CFDG000 - CFDG003	Fluorescent (DG*) • Streptavidin
CFFR001 - CFFR003	Fluorescent (FR*) • Streptavidin
CS01000 - CS01002	Silica • Streptavidin
PMS1N	ProMag™ 1 Series • Streptavidin
PMS3N	ProMag™ 3 Series • Streptavidin
PMS3HP	ProMag™ HP 3 Series • Streptavidin
BM551	BioMag® Streptavidin
BM568	BioMag® Streptavidin, Nuclease-free
BP621	BioMag®Plus Streptavidin / Biotin Binding Kit
BP628	BioMag®Plus Streptavidin
CDCR001	Visibly Dyed (CR*)Polymer • Biotin
CDCB001	Visibly Dyed (CB*)Polymer • Biotin
BM552	BioMag® Biotin
CP10000	Polymer • Biotin
BM554	BioMag® Protein A
BP620	BioMag®Plus Protein A
BP614	BioMag®Plus Protein A Antibody Isolation Kit
CP02N	Polymer • Protein A
BM553	BioMag® Protein G
BP627	BioMag®Plus Protein G
BP626	BioMag®Plus Protein G Antibody Isolation Kit
PMG3N	ProMag® 3 Series • Protein G

### AFFINITY LIGAND PRODUCTS CONTINUED

Cat. #	Product Description
BM554	BioMag® Protein A
BP620	BioMag®Plus Protein A
BP531	BioMag®Plus Concanavalin A
BP530	BioMag®Plus Wheat Germ Agglutinin
BM563	BioMag® Goat anti-Human IgG
BM562	BioMag® Goat anti-Human IgG (Fc)
BM561	BioMag® Goat anti-Human IgM
BM549	BioMag® Goat anti-Mouse IgG
BM550	BioMag® Goat anti-Mouse IgG (Fc)
BP619	BioMag®Plus Goat anti-Mouse IgG
BP612	BioMag®Plus Goat anti-Mouse IgG Antibody Coupling Kit
BM558	BioMag® Goat anti-Mouse IgM
BM559	BioMag® Goat anti-Rabbit IgG
BM560	BioMag® Goat anti-Rat IgG
BM548	BioMag® Goat anti-Rat IgG (Fc)
BM557	BioMag® Goat anti-Rat IgM

\* DG - Dragon Green (480,520)

\* FR - Flash Red (660, 690)

\* CR - Crimson Red


\* CB - Cabo Blue





We stand behind our products. Regardless of the size of your question or the size of your company, we offer tech support, absolutely free.

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