

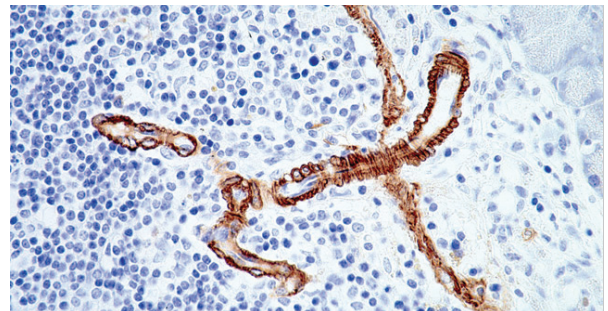
Want to Swap Avidin for Streptavidin?
4Plus Your Results When You Switch

4Plus Your Results, How Streptavidin Can Benefit Your Lab

Streptavidin is a protein that has similar binding properties to avidin. It has 4 subunits and each subunit can bind one molecule of biotin. Since streptavidin has an extremely high binding affinity ($K_d=10^{-15}$) for biotin, it has proven useful in the detection of antigens coupled with biotinylated secondary antibodies.¹

There are several advantages when using streptavidin versus an avidin complex (ABC). In contrast to avidin, streptavidin is not glycosylated and is therefore uncharged at neutral pH (6.5 versus 10), reducing nonspecific background staining. Streptavidin also lacks the carbohydrate side chains that may be an additional cause of non-specific background. Another key advantage of streptavidin is the significant increase in sensitivity (perhaps from less steric hindrance), thus facilitating an increase in overall binding capacity. Streptavidin-enzyme conjugates are also more stable than an ABC complex. The ABC complex must be freshly made 30 minutes prior to use and is stable only for a few days, while a streptavidin-conjugate can be stored for up to 1-2 years and is ready to use, saving time and room for error.¹

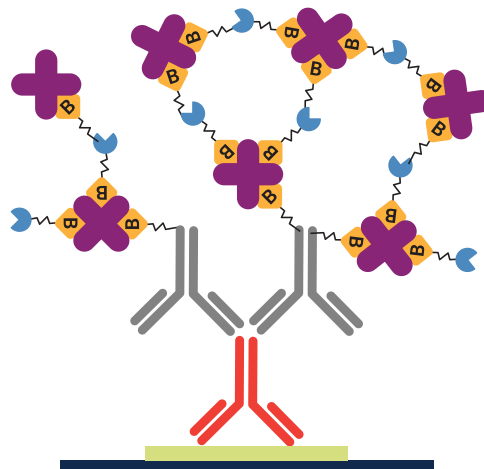
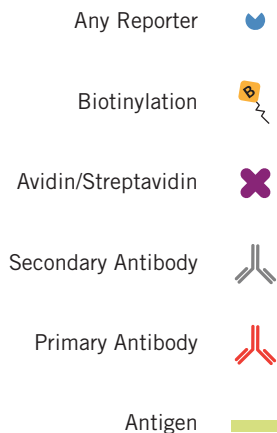
Biocare Medical's 4plus™ detection system has been designed for reliable, cost-effective, two-step detection, providing a high-level of sensitivity. 4plus™ detection system can be used with mouse and rabbit primary antibodies; many primary antibodies can be diluted two-fold compared to other commercially available detection systems. After labeling the antigen with primary antibody, a species-specific or universal, affinity-purified, biotinylated secondary antibody is added to bind. Horseradish peroxidase (HRP) or alkaline phosphatase (AP) labeled-streptavidin is then added. A chromogen/substrate is applied that reacts with the HRP or AP enzymes to produce an intense color signal.¹



4plus detection system used to visualize Smooth Muscle Actin

Streptavidin significantly increases sensitivity, facilitating greater binding capacity

Streptavidin protein can bind up to four biotin molecules, which are normally conjugated to an enzyme, antibody or target protein



Are you using ABC detection in your lab? Try 4plus™ Detection today and see the difference! Our friendly staff is here to assist you in making sure your run is perfectly optimized to meet laboratory needs. Please contact Biocare anytime at 800-799-9499 or click the link here for more information: <https://biocare.net/detection-four-plus/>

1. "Detection 4plus", Biocare Medical, <https://biocare.net/detection-four-plus/>.