



Product Information

MONOCLONAL ANTI-AVIDIN BIOTIN CONJUGATE

Clone WC19.10

Ig Fraction of Mouse Ascites Fluid

Product No. **B 9655**

Product Description

Monoclonal Anti-Avidin (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Purified avidin was used as the immunogen. The isotype is determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2). The immunoglobulin fraction of the ascites fluid is conjugated to biotin epsilon-amino caproic acid-N-hydroxysuccinimide.

The antibody was selected specifically for its ability to bind to the intact avidin-biotin complex.¹ Because this antibody binds an epitope other than the biotin binding site, the product enhances signals obtained in both avidin-biotin-enzyme ELISAs and qualitative immunohistologic staining procedures. The antibody reacts specifically with egg white avidin and ExtrAvidin®, and does not recognize streptavidin by ELISA and immunodot blot.

Avidin is a glycoprotein (68 kDa) composed of four identical polypeptide chains isolated from egg whites which has a high binding affinity for the vitamin biotin.

This strong interaction has been exploited in the design of immunoassays and immunohistologic staining techniques to serve as a basis for identifying antigen-antibody interactions.² While standard assay methods will suffice for most studies, there are occasions when enhanced sensitivity is needed to detect minute amounts of antigen or localize low densities of antigens in histologic sections. Biotin Conjugated Monoclonal Anti-Avidin enhances the sensitivity of avidin-biotin immunoassays by selectively enlarging the avidin-biotin complex, thereby increasing the signal. The product may also be used to apply a different ligand to a previously developed avidin-biotin complex. Biotin Monoclonal Anti-Avidin may be used in many applications where avidin can be introduced as a target label such as in immunochemical and DNA hybridization techniques.

Reagents

The conjugate is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% inactivated BSA and 15 mM sodium azide as a preservative.

Precautions and Disclaimer

Due to the sodium azide content a material safety data sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Product Profile

- 1. ELISA**
Microtiter plates are coated with 1 µg/ml of human IgG. Biotin goat anti-human IgG at 1 µg/ml is the primary antibody followed by avidin at 40 µg/ml. A 1:100,000 to 1:150,000 dilution of the product followed by ExtrAvidin Peroxidase (Product No. E 2886) at 2 µg/ml gives absorbance value of 1.0 at A₄₅₀ following 30 minutes of enzymatic reaction.
- 2. Dot Blot**
In an indirect assay using human IgG 40 ng/dot, Biotin Monoclonal Anti-Human IgG Fc (Product No. B 3773) followed by avidin at 40 µg/ml, a dilution of at least 1:20,000 of product was used, followed by ExtrAvidin Peroxidase (Product No. E 2886) at 1 µg/ml.
- 3. Immunohistology**
Using formalin-fixed, paraffin-embedded human tonsils, biotin conjugated anti-human IgG, and FITC-avidin, a 1:2,000 dilution of product was used, followed by Extravidin-Peroxidase (Product No. E 2886) at 50 µg/ml.

Storage

For continuous use, store at 2-8 °C for up to one month. For extended storage, the solution may be frozen in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

References

1. Kessler, C., *Molecular and Cellular Probes*, **5**, 161 (1991).
2. Kehayov, I., et al., *Hybridoma*, **9**, 493 (1990).

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