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ProductInformation

ANTI-HUMAN POLYVALENT IMMUNOGLOBULINS
(a, g, and m-chains specific)
Biotin Conjugate
Affinity Isolated Antigen Specific Antibodies
Antibodies Developed in Goats

Product Number **B9015**

Product Description

Individual antisera to human IgA, IgG, and IgM are developed in goats using purified immunoglobulin heavy chains (α, γ, and μ) as the immunogens. Affinity isolated antigen specific antibodies are obtained from each antisera by immunospecific purification which removes essentially all goat serum proteins, including immunoglobulins, that do not specifically bind to the heavy chains. Each specific antibody is then conjugated to Sigma N-Hydroxysuccinimidobiotin (Product No. H 1759) by a modification of the method of Bayer, et al.[1] The product is prepared by combining the conjugated antibodies to ensure consistant activity for each heavy chain.

Specificity of the Biotin Conjugated Anti-Human Polyvalent Immunoglobulins is determined by Enzyme Linked Immunosorbent Assay (ELISA). The conjugate is specific for human IgA, IgG, and IgM when tested against human IgA, IgG, IgM, Bence Jones Kappa, and Lambda myeloma proteins.

Identity and purity of the antibody is established by immunoelectrophoresis (IEP), prior to conjugation. Electrophoresis of the antibody preparation followed by diffusion versus anti-goat IgG and anti-goat whole serum results in single arcs of precipitation.

Reagents

The conjugate is provided as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% BSA with 0.1% 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 hazards and safe handling practices.

Storage/Stability

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.

Product Profile

The product is provided with a specific antibody content of 0.2-1.0 mg/ml (prior to the addition of BSA).

A minimum working dilution of 1:7,000 for each Ig was determined by direct ELISA. Working dilution is defined as the dilution of conjugate that gives a change in absorbance of 1.0 at 492 nm after 30 minutes of substrate conversion at 25 °C (Voller, et al. and Guedson et al.).[2,3] Microtiter plates are coated individually with purified human IgA, IgG, and IgM at concentrations of 200 ng/ml in 0.05M carbonate/bicarbonate buffer pH 9.6 (carbonate/bicarbonate buffer capsules are available as Product No. C 3041). Following incubation with the biotinylated antibody, a solution of Avidin-Horseradish Peroxidase (Product No. A 3151, diluted in 0.01 M phosphate buffered saline, pH 7.4, containing 0.05% Tween 20 and 0.5% BSA) is added. Substrate: 0.04% *o*-Phenylenediamine Dihydrochloride** (OPD, Product No. P 8412), and 0.012% Hydrogen Peroxide** (H_2O_2, Product No. H 1009) in phosphate-citrate buffer, pH 5.0 [25.7 ml 0.2 M dibasic sodium phosphate (Product No. S 0876), 24.3 ml 0.1 M citric acid (Product No. C7129) and 50 ml deionized water].

**Add immediately before use.

References

1. Bayer, E. A., et al., Methods in Enzymology, 62, 308 (1979).
2. Voller, A., et al., Bull. World Health Organ., 53, 55 (1976).
3. Guedson, J.L., et al., J. Histochem. and Cytochem., 27, 1131 (1979).

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