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Product Information

**ANTI-MOUSE IgG (Fab SPECIFIC)
PEROXIDASE CONJUGATE**
Antibody developed in Goat
Affinity Isolated Antigen Specific Antibody
Adsorbed with Human IgG and Rat Serum Proteins

Product Number **A 3682**

Product Description

Anti-mouse IgG (fab specific) is developed in goat using purified mouse IgG, Fab fragment as the immunogen. Affinity isolated antigen specific antibody is obtained from goat anti-mouse IgG antiserum by immunospecific purification which removes essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the Fab fragment of mouse IgG. The antibody preparation is solid phase adsorbed with human IgG and rat serum proteins to ensure minimal cross reactivity in tissue or cell preparations. Goat anti-mouse IgG is conjugated to horseradish peroxidase by protein cross linking with glutaraldehyde.

Specificity of the Peroxidase Conjugated Anti-Mouse IgG, Fab fragment is determined by Enzyme Linked Immunosorbent Assay (ELISA). The conjugate is specific for mouse IgG and the Fab fragment of mouse IgG. It will react with all mouse IgG subclasses (G1, G2a, G2b and G3) and with mouse IgA, IgM and IgE. Cross reactivity of the antibody-conjugate is also determined by ELISA. The conjugate shows no reactivity with the Fc fragment of mouse IgG or with human and rat IgG.

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

The product is a very sensitive and specific reagent for immunoenzymatic techniques such as ELISA, immunohistochemical studies, and dot or immunoblotting. This conjugate offers the advantage of low background and increased sensitivity for mouse immunoglobulins without cross reactivity to human or rat immunoglobulins present on membrane or cell surfaces.

Reagents

The conjugate is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 0.01% thimerosal as a preservative.

Precautions and Disclaimer

This product is for research use only. Consult the MSDS for information regarding hazards and safe handling practices.

Storage/Stability

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

Titers

1. Direct ELISA: Minimum 1:60,000
We are now reporting lot specific information as a titer by direct ELISA rather than as a working dilution (see below). Titer is defined as the dilution of conjugate sufficient to give a change in absorbance of 1.0 at 450 nm after 30 minutes of substrate conversion at 25 °C (Voller, et al.)¹. Microtiter plates are coated with purified mouse IgG at a concentration of 5 µg/ml in 0.05 M carbonate-bicarbonate buffer, pH 9.6 (Carbonate-Bicarbonate Buffer Capsules are available as Product No. C 3041).

Substrate: o-Phenylenediamine Dihydrochloride (OPD, Sigma Product No. P 8287), 0.4 mg/ml in 0.05 M phosphate-citrate buffer, pH 5.0 containing 0.03% sodium perborate (Phosphate-Citrate Buffer

Capsules with Sodium Perborate are available as Product No. P 4922).

2. Dot Blot

- a. A minimum working dilution of 1:4,000 was determined in a direct assay using 40 ng mouse IgG/dot.
- b. A minimum working dilution of 1:4,000 was determined in an indirect assay using 20 ng human IgG/dot and Mouse Monoclonal Anti-Human IgG (Sigma Product No. I 5885) at 1:1,000 as the primary antibody.
- c. In an indirect chemiluminescence system using 20 ng human IgG/dot and Monoclonal Anti-Human IgG (Product No. I 5885) as the primary antibody, this product was determined to have a minimum dilution of 1:80,000 when used as secondary antibody. Luminol plus enhancer was used as substrate.

3. Immunohistology

A minimum working dilution of 1:150 was determined by an indirect assay using formalin-fixed, paraffin-embedded human tonsil and Monoclonal Anti- α -Smooth Muscle Actin (Product No. A 2547) as the primary antibody.

Working dilutions should be determined by titration assay. Due to differences in assay systems, these titers may not reflect the user's actual working dilution.

References

- 1. Voller, A., et al., Bull. World Health Organ., **53**, 55 (1976).

This goat antiserum was maintained at pH 5.0 for 40 minutes to meet USDA requirements.

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