Technical Bulletin

Anti-Human IgM (μ-chain specific)–Peroxidase Antibody Produced in Goat

Affinity isolated antibody

A0420

Product Description

Anti-Human IgM (μ-chain specific) is produced in goat using human IgM as the immunogen. The antibody is isolated from goat anti-human IgM antiserum by immunospecific purification to remove essentially all goat serum proteins, including immunoglobulins, which do not specifically bind to the μ-chain of human IgM. Goat anti-human IgM is conjugated to peroxidase by means of a two-step glutaraldehyde method.

Specificity of Anti-Human IgM (μ-chain specific)-Peroxidase is determined by ELISA. The conjugate is specific for human IgM when tested against human IgA, IgG, IgM, Bence Jones kappa and lambda myeloma proteins.

Cross-reactivity of the antibody-conjugate is determined by ELISA. The conjugate shows no reactivity with mouse or rat IgG.

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. The product is purified to remove unconjugated material.

Reagent

Supplied as a solution in 0.01 M phosphate-buffered saline, pH 7.4, containing 0.05% MIT as a preservative.

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

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet 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, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use.

Product Profile

Molar Ratio

(IgG:Peroxidase) = 0.6-1.5

Direct ELISA

Minimum 1:50,000

We are now reporting lot specific information as a titer by direct ELISA rather than as a working dilution.

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.[1]

Microtiter plates are coated with purified human IgM at a concentration of 5 μg/mL in 0.05 M carbonate-bicarbonate buffer, pH 9.6.

Carbonate-Bicarbonate Bicarbonate Buffer capsules are available as Cat. No. C3041.

Substrate: *o*-Phenylenediamine dihydrochloride (OPD), Cat. No. P8287, 0.4 mg/mL in 0.05 M phosphate-citrate buffer, pH 5.0 containing 0.03% sodium perborate.

Phosphate-Citrate Buffer with Sodium Perborate capsules are available as Cat. No. P4922.

Dot Blot

A minimum dilution of 1:100,000 was determined in a direct chemiluminescence assay using 20 ng human IgM/dot. Luminol plus enhancer was used as substrate.

Immunohistochemistry

A minimum dilution of 1:200 was determined in a direct assay using formalin-fixed, paraffin-embedded human tonsil sections.

Note: 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

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

Notice

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