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## Product Information

### ANTI-HUMAN KAPPA LIGHT CHAIN (BOUND AND FREE) BIOTIN CONJUGATE

Antibody Developed in Goat  
Affinity Isolated Antigen Specific Antibody

Product No. B 1393

#### Product Description

Antiserum is developed in goat using purified human kappa light chain as the immunogen. Affinity isolation removes essentially all goat serum proteins, including immunoglobulins which do not specifically bind to human kappa chain (bound or free). Goat anti-human kappa light chain is conjugated to Sigma N-Hydroxysuccinimidobiotin (Product No. H 1759) by a modification of the method of Bayer, et al.<sup>1</sup>

#### Reagent

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.

#### Specificity

Specificity of the Biotin Conjugated Anti-Human Kappa Light Chain is determined by Enzyme Linked Immunosorbent Assay (ELISA). The conjugate is specific for human kappa light chain when tested against bound light chains (on human IgA, IgG, IgM) or free light chains (Bence Jones Kappa and Lambda myeloma proteins).

#### Identity and Purity

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 result in single arcs of precipitation.

#### Working Dilution

Minimum 1:20,000 (Direct ELISA)  
Working dilution is defined as the dilution of conjugate that will give 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.)<sup>2,3</sup>. Microtiter plates are coated with purified human kappa light chain at a concentration of 200 ng/ml in 0.05 M 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<sub>2</sub>O<sub>2</sub>, 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. C 7129) and 50 ml deionized water].

\*\*Add immediately before use.

#### Antibody Content

The product is provided with a specific antibody content of 0.1-4.0 mg/ml (prior to the addition of BSA).

#### 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.

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