Anti-Kappa Light Chain-FITC

Rabbit polyclonal antibody

Reference: AP10366C

INTENDED USE AND PRESENTATION:

For research use only.

AP10366C, 1 mL. Concentrated FITC-conjugated antibody with glycerol, carrier protein and preservative for stabilisation.

SUMMARY, EXPLANATION AND LIMITATIONS:

Immunoglobulins belong to a group of related glycoproteins which make up 20% of serum proteins. Antigens and immunoglobulins react to confer immunity to individuals. Immunoglobulins have similar structures of two identical heavy chains and two identical light chains. Both the heavy chains and the light chains are divided into constant and variable regions. The constant regions have the same amino acid sequences between all the immunoglobulin classes. The variable regions have approximately 110 amino acids with high sequence variability. The amino acid sequence of the heavy chain determines the class of an immunoglobulin. The five types of immunoglobulin heavy chains are known as: IgG, IgA, IgM, IgD, and IgE. IgG is divided into four subclasses, and IgA is divided into two subclasses. In serum IgA and IgG are monomers with a single 4 polypeptide unit; while, IgM is a pen tamer. IgA may also form polymers. Kappa light chain antibody can be used for the identification of leukemias, plasmacytomas and certain non Hodgkin's lymphomas. Kappa light chain contains one immunoglobulin like domain.

Immunofluorescence (IF) is a complex technique in which immunological and histological detection methods can be combined. In general, the manipulation and processing of tissues before immunostaining, especially different types of tissue fixation and embedding, as well as the nature of the tissues themselves may cause inconsistent results (Nadji and Morales, 1983). Insufficient contrast staining and/or improper mounting of the sample may influence the interpretation of results.

Isotype: Rabbit IgG

Immunogen: Pool of human kappa light chain isolated from the urine of patients with Bence Jones Proteinuria.

Staining pattern: Cytoplasmatic and secreted.

The interpretation of the stain results is the full responsibility of the user. Any experimental result must be confirmed by a medically established diagnostic product or procedure.

Positive control: Tissue sample from tonsil.

External negative control: Tissue sample homologous to the test sample incubated with an antibody isotype not specific for Kappa Light Chain-FITC.

APPLICATIONS:

This antibody is designed for the specific localization of human Kappa Light Chain using IF techniques in formalin-fixed, paraffin-embedded tissue sections and frozen tissue.

PRODUCT COMPOSITION:

Rabbit polyclonal immunoglobulin fraction conjugated with fluorescein isothiocyanate isomer 1 purified from antiserum. The preparation contains, saline buffer, stabilising and carriers proteins, and sodium azide as a preservative.

METHODS AND PROCEDURE:

Principles of the procedure: The demonstrations of antigens by IF is a sequential procedure with several steps if primary antibody is not conjugated with fluorescent molecule. This involving first the application of a specific antibody for the antigen of interest (primary antibody), then a secondary antibody conjugated which fluorescent molecule (this steep is not applicable if the primary antibody is conjugated with fluorescent molecule). The sample is washed between each step. The results are interpreted using a fluorescent microscope with adequate filterer set.

Specimen: Paraffin-embedded tissue samples should be used. The antibody is also useful for immunostaining frozen tissue samples and cell culture.

Suggested staining procedure: Vortex and spin.

Working dilution	1:10 – 1:100
Incubation	30-60 min. at 22°C, 4-18 hr at 4°C, or 10-30 min at 37°C, in the dark

See our web site at www.gennova-europe.com for detailed protocols ancillary reagents and support products.

MATERIALS BUT NOT SUPPLIED:

All reagents, materials, and laboratory equipment for IF procedures are not provided with this antibody. This includes primary antibodies, adhesive slides and cover slips, positive and negative control tissues, Xylene or adequate substitute, ethanol, distilled H_2O, heat pretreatment equipment (pressure cooker, steamer, microwave), pipettes, Coplin jars, glass jars, moist chamber, histological baths, negative control reagents, counter-staining solution, mounting materials, and microscope.

Buffered solutions for antigen retrieval, enzyme treatments, highly sensitive detection systems, and other auxiliary reagents are available from Gennova Scientific.

STORAGE AND STABILITY:

Store at 2-8 °C in the dark until the expiration date printed on product label. Do not use after the expiration date. If fresh solutions are required, these must be prepared immediately prior to use, and will be stable for at least one day at 2-8 °C in the dark. If the product is stored under different conditions from those stipulated in these technical indications, the new conditions must be verified by the user.

Gennova Scientific guarantees that the product will maintain all of the described characteristics from the production date until the expiration date, as long as the product is stored and used as recommended. No other guarantees are provided. Under no circumstances is Gennova Scientific obliged to cover damages caused by use of this reagent.

TROUBLESHOOTING:

If unusual staining is observed or any other deviations from the expected results, please read these instructions carefully,

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along with the instructions from the detection system. If this does not solve the problem, please contact Gennova Scientific's technical support department or your local distributor.

PRECAUTIONS:

Use only by qualified personnel.

Use proper protective equipment in order to avoid contact with reagents and samples in the eyes, skin, and mucosal tissues. In case of contact with sensitive areas, immediately flush the affected area with water. Avoid microbial contamination of the reagent, as this may produce nonspecific staining results. This antibody contains sodium azide (NaN_3), used as a stabilising agent, which is not considered to be a hazardous material in the concentration used. Concentration of sodium azide in drainage pipes made of lead or copper can cause the formation of highly explosive metallic azides. In order to avoid this, sodium azide must be disposed of along with a large volume of running water. Material safety data sheet (MSDS) for pure sodium azide is available upon request.

PERFORMANCE CHARACTERISTICS:

Gennova Scientific has performed studies to evaluate the functioning of these antibodies for use with standard detection systems, concluding that the product is both specific and sensitive for the antigen of interest.

BIBLIOGRAPHY:

Nadji M, Morales AR. Immunoperoxidase, part 1: the techniques and its pitfall. Lab Med 1983; 14:767-770.

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