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Product Information

Monoclonal Anti-Rat κ + λ Light Chains

Biotin Conjugate

Clones RT-39 + RL-6

Immunoglobulin Fraction of Mouse Ascites Fluid

Product Number **B 1656**

Product Description

Monoclonal Anti-Rat κ Light Chain (1a+1b) (mouse IgG1 isotype) is derived from the RT-39 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with purified rat IgG. Monoclonal Anti-Rat λ Light Chain (mouse IgG2a isotype) is derived from the RL-6 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with purified rat IgG. The isotypes are determined using Sigma ImmunoType™ Kit (Product Code ISO-1) and by a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2). The product is a solution of Biotin Conjugated Monoclonal Anti-Rat κ Light Chain and Biotin Conjugated Monoclonal Anti-Rat λ Light Chain. Conjugates are prepared using the immunoglobulin fractions of the mouse ascites fluids. The covalent coupling of biotin to the immunoglobulin allows for the binding of Avidin, ExtrAvidin™ or Streptavidin bearing a variety of different labels.

Monoclonal Anti-Rat κ Light Chain (1a+1b) recognizes an epitope located on the rat κ light chain (1a and 1b allotypes) on the various rat immunoglobulin classes and subclasses. The antibody detects the κ light chains derived from normal serum or myeloma proteins, but not the rat λ chains. It localizes the denatured and reduced molecule when applied in immunoblotting. Weak cross-reaction is observed with guinea pig immunoglobulins but not with IgG preparations from human, bovine, cat, chicken, dog, goat, horse, mouse, pig, rabbit, or sheep when tested by indirect ELISA. The antibody is also applicable as a secondary antibody in immunohistochemical staining of human tissue since it does not react against the tissue itself.

Monoclonal Anti-Rat λ Light Chain recognizes an epitope located on the rat λ light chain on the various rat immunoglobulin classes and subclasses. The antibody detects the λ light chain derived from normal serum or myeloma proteins, but not the κ -light chains.

Weak cross-reaction is observed by indirect ELISA with guinea pig immunoglobulins but not with IgG preparation of human, bovine, cat, chicken, dog, goat, horse, mouse, pig, rabbit, or sheep. It localizes the denatured and reduced molecule when applied in immunoblotting. The antibody is also applicable as a secondary antibody in immunohistochemistry of human tissue because it does not react against the tissue itself.

Biotin Conjugated Monoclonal Anti-Rat κ + λ Light Chains may be used for the localization of light chains on rat immunoglobulins using various immunochemical assays such as ELISA, immunohistology, and dot immunobinding assay.

Reagents

The conjugate is provided as a liquid in 0.01 M phosphate buffered saline, pH 7.4, with 1% BSA and 15 mM 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

1. Direct ELISA: At Least 1:80,000
Titer is determined in ELISA using 1 µg/ml freshly prepared myelomas of rat κ light chains, rat λ light chains, and normal rat IgG proteins for coating of microtiter plates with ExtrAvidin (Product No. E 2886).

Note: Second antibodies against mouse immunoglobulins may cross-react with the rat protein coated on the microtiter plate unless properly adsorbed with rat immunoglobulins.

2. Dot Blot
 - a. A dilution of 1:4,000 was determined in a direct assay using 5-40 ng/dot of freshly prepared myelomas of rat κ light chains, rat λ light chains, and normal rat IgG proteins, and 2 µg/ml ExtrAvidin Peroxidase.

- b. A dilution of 1:40,000 was determined in a direct chemiluminescence assay using 10-40 ng/dot of freshly prepared myelomas of rat κ light chains, rat λ light chains, and normal rat IgG proteins, and 2 µg/ml ExtrAvidin Peroxidase. Luminol plus enhancer was used as substrate.

3. Immunohistology
A dilution of 1:600 was determined in an indirect assay using formalin-fixed, paraffin-embedded sections of human tonsils with rat anti-human IgG as first antibody and ExtrAvidin Peroxidase at 25 µg/ml.

In order to obtain best results, it is recommended that each user determine the optimal working dilution for individual applications by titration assay.

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