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ProductInformation

Monoclonal Anti-Mouse Kappa Light Chains
Clone EM-34.1
Rat Ascites Fluid

Product No. **K 2132**

Product Description

Monoclonal Anti-Mouse Kappa Light Chains (rat IgG2b isotype) is derived from the EM-34.1 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized F344 rat. Purified murine monoclonal immunoglobulins bearing kappa light chains were used as the immunogen.[1]

Monoclonal Anti-Mouse Kappa Light Chains recognizes an epitope located in the κ light chain of the mouse immunoglobulin molecule.[1] It does not cross-react with the mouse λ light chain. The antibody binds isolated chains and complete immunoglobulins of both normal serum and monoclonal immunoglobulins. It detects immunoglobulin bound to nitrocellulose (immunoblotting), immunoglobulin immobilized on polystyrene (indirect and capture ELISA, RIA[1]), and surface immunoglobulin intercalated in cell membranes (immunofluorescence and flow cytometry). The antibody may also be used as a secondary antibody in immunohistochemistry of human tissue, where it does not cross-react with the tissue.

Monoclonal Anti-Mouse Kappa Light Chains may be used for the localization of mouse κ light chains and κ chain-bearing immunoglobulins, using various immunochemical assays such as indirect ELISA, capture ELISA, immunoblot, dot blot, immunohistochemistry, immunocytochemistry, flow cytometry, and RIA.

Immunoglobulins are symmetrical molecules made up of two identical heavy chains and two identical light chains. There are two types of light chains, κ and λ. Each immunoglobulin molecule contains either κ or λ light chains. In the mouse, there is only one κ light chain class, but there are three λ chain classes (λ1-λ3). More than 95% of immunoglobulins (Ig) in most inbred strains of mice carry the κ type of light chains.[2] The mouse has been extensively used as a research model in pharmacology, oncology and in studies of immunological systems. Mouse polyclonal and monoclonal antibodies have come into a widespread use as primary antibodies.

Secondary antibodies to κ light chains are valuable for the detection, quantification, isotyping and purification of mouse immunoglobulin-expressing κ light chains. Anti-mouse antibodies are commonly produced by xenogeneic immunization of rabbits, goats or sheep, resulting in antibodies that, unless extensively adsorbed, cross-react with immunoglobulins of other species. Monoclonal anti-mouse immunoglobulins, which are devoid of any binding capacity to human and many other species can be used as an essential tool in many applications.

Reagent

The product is provided as ascites fluid, produced in SCID (Severe Combined Immuno-Deficient) mice with 0.1% sodium azide as a preservative.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze 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.

Precautions

Due to the sodium azide content a material safety sheet (MSDS) for this product has been sent to the attention of the safety officer of your institution. Consult the MSDS for information regarding hazardous and safe handling practices.

Product Profile

The minimum antibody titer of 1:8,000 was determined by indirect ELISA, using 10 µg/ml freshly prepared mouse monoclonal immunoglobulins containing the kappa light chains for coating.

Notes:

1) Second antibody against rat immunoglobulins may cross-react with the mouse protein unless properly adsorbed with mouse immunoglobulins.
2) In order to obtain best results in different techniques and preparations we recommend to determine optimal working dilutions by titration test.

References

1. Baniyash, M., and Eshhar, Z., Eur. J. Immunol., **14**, 799 (1984).
2. Bothwell, A., et al., Nature, **298**, 380 (1982).

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