



Product Information

**MONOCLONAL ANTI-HUMAN KAPPA LIGHT
CHAINS
(BOUND AND FREE) QUANTUM RED™ CONJUGATE
CLONE KP-53
Mouse Immunoglobulin**

Product Number R 0137

Product Description

Monoclonal Anti-Human Kappa Light Chains (mouse IgG1 isotype) is derived from the hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Purified human IgG myeloma proteins covalently coupled to polyaminostyrene (PAS) microbeads were used as the immunogen. The purified immunoglobulin is conjugated to Quantum Red and then further purified to remove unconjugated Quantum Red.

Monoclonal Anti-Human Kappa Light Chains is specific for the kappa light chains of human immunoglobulins (all isotypes), and is non-reactive with lambda light chains. The antibody recognizes both the heavy chain-bound and free (Bence Jones) human kappa light chains in an ELISA.

Immunoglobulins are composed of 2 heavy and 2 light polypeptide chains held together by noncovalent forces and interchain disulfide bridges. The various types of human (and other mammalian) immunoglobulins contain one of two light chain types, either kappa or lambda. Variability in amino acid sequence occurs on the N-terminus of the light chains and, together with the heavy chain N-terminus, determines antigenic recognition. In monoclonal disorders, such as myeloma and Waldenstrom's macroglobulinemia, an increase in the level of a single immunoglobulin class can be accompanied by disproportionate increases in either kappa or lambda light chains. In many cases of B cell malignancy, there is an increased production of light chains which are not combined with heavy chains. These circulate in the various body fluids (blood and cerebral spinal fluid) and tissues, and are found in enormous amounts as free molecules in the urine (Bence Jones paraproteins).

Reagents

The conjugate is provided as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 1% BSA and 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.

Storage/Stability

For continuous use, store at 2-8 °C. 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

Quantum Red Conjugated Monoclonal Anti-Human Kappa Light Chains may be used for the identification of human kappa light chains on the surface of B cells in immunoassays, such as flow cytometry.

It is recommended that 10µl of conjugate be used for labeling of 1×10^6 human peripheral blood lymphocytes in flow cytometric applications.

Notes

1. It is recommended that cells be washed 2X in PBS containing 5% BSA and resuspended to their original volume before labeling.
2. For best results, dual label with a pan B cell antibody (e.g. Sigma Product No. F 3899) and gate on the positive B cells to obtain saturating monoclonal antibody levels.

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

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