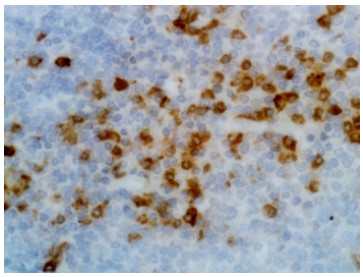
Recombinant Human Kappa Light Chain Antibody [clone RM126] (R20178)

Catalog No.	Formulation	Size
R20178-100UG	1 mg/ml in PBS with 50% glycerol, 1% BSA and 0.09% sodium azide	100 ug

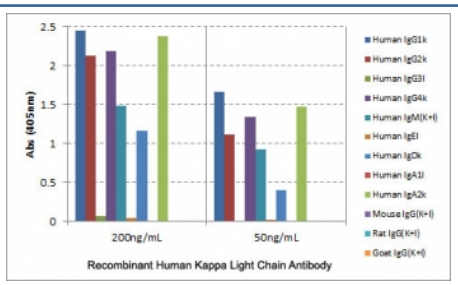
Recombinant RABBIT MONOCLONAL

Bulk quote request

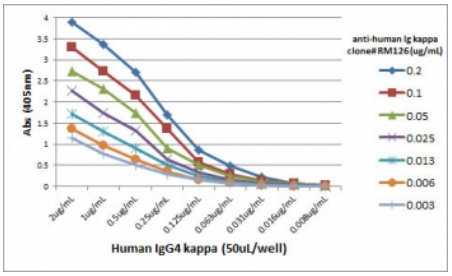
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Clonality	Recombinant Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	RM126
Purity	Protein A purified from animal origin-free supernatant
UniProt	P01834
Gene ID	3514
Applications	ELISA : 0.05-0.2ug/ml Immunocytochemistry : 0.5-2ug/ml Immunohistochemistry : 0.5-2ug/ml
Limitations	This recombinant Human Kappa Light Chain antibody is available for research use only.



IHC testing of FFPE human tonsil tissue with recombinant Human Kappa Light Chain antibody. A pH6 Citrate buffer or pH9 Tris/EDTA buffer HIER step is recommended for testing of FFPE tissue sections.



ELISA of human immunoglobulins shows the recombinant Human Kappa Light Chain antibody reacts to the kappa light chain of hIgs. No cross reactivity with the lambda light chain, mouse/rat/goat IgG.



ELISA Titration: the plate was coated with different amounts of human IgG4Îº. A serial dilution of the recombinant Human Kappa Light Chain antibody was used as the primary and an alkaline phosphatase conjugated anti-rabbit IgG as the secondary.

Description

The Recombinant Human Kappa Light Chain antibody is produced as a recombinant reagent designed for detecting and studying human kappa light chains in immunoassays. Immunoglobulin light chains occur in two types, kappa and lambda, which pair with heavy chains to form the complete antibody molecule. The kappa light chain is the more common subtype in humans and is expressed in the majority of circulating antibodies. The Recombinant Human Kappa Light Chain antibody recognizes the constant region of the kappa light chain, providing a valuable tool for quantifying and characterizing antibody production and for use as a control reagent in multiple assay platforms.

Structurally, light chains contain one variable domain and one constant domain. When paired with heavy chains, the variable regions contribute to antigen recognition, while the constant domain stabilizes the overall immunoglobulin architecture. The Recombinant Human Kappa Light Chain antibody specifically targets the constant region of kappa chains, enabling selective detection of kappa bearing immunoglobulins regardless of antigen specificity. Recombinant design ensures lot to lot consistency, eliminating the variability that can occur with polyclonal preparations.

Applications of the Recombinant Human Kappa Light Chain antibody include ELISA, western blotting, and immunohistochemistry. In ELISA, it is used to measure antibody light chain composition in serum or hybridoma supernatants. In western blotting, the antibody detects kappa light chains under reducing or non reducing conditions, distinguishing them from lambda light chains. In immunohistochemistry, the Recombinant Human Kappa Light Chain antibody helps visualize kappa chain restricted plasma cells, aiding in the diagnosis of lymphoproliferative disorders. This reagent is also useful in flow cytometry, where it enables monitoring of kappa light chain expression at the single cell level.

Clinically, analysis of kappa light chain expression is important for identifying clonal expansions of B cells, such as those observed in multiple myeloma, chronic lymphocytic leukemia, and other lymphoid malignancies. By providing a standardized recombinant reagent, the Recombinant Human Kappa Light Chain antibody supports consistent laboratory testing and research studies. Synonym terms such as recombinant kappa constant region antibody and recombinant human kappa immunoglobulin light chain antibody improve search coverage and product accessibility.

By providing validated and reproducible detection, the Recombinant Human Kappa Light Chain antibody enhances accuracy in immunoassays and clinical research. NSJ Bioreagents ensures strict quality control, giving scientists and clinicians confidence in the reliability of this reagent for evaluating antibody structure and expression. With this tool, investigators can accurately monitor kappa light chain prevalence and distinguish it from lambda light chain expression in diverse biological contexts.

This recombinant Human Kappa Light Chain antibody reacts to the kappa light chain of human immunoglobulins. No cross reactivity with lambda or mouse/rat/goat IgG.

Application Notes

The stated application concentrations are suggested starting points. Titration of the recombinant Human Kappa Light Chain antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Human IgG was used as the immunogen for this recombinant Human Kappa Light Chain antibody.

Storage

Store the recombinant Human Kappa Light Chain antibody at -20oC (with glycerol) or aliquot and store at -20oC (without glycerol).