abcam

ab1050

Anti-Kappa light chain antibody [MEM-09]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Tissue preparation containing IGKC protein. The exact immunogen used to generate this antibody is proprietary information. Database link P01834
Clone number	MEM-09
Purification technique	Affinity purification Protein A
Specificity	MAb MEM-09 reacts with both secreted and B cell-surface human immunoglobulin, specifically reacts with k-light chains. Material immunoprecipitated from human serum using MAb MEM-09 consist of IgG and traces of IgM.
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS. Purity >95% by SDS-PAGE.

Reactivity data

ICC

Expected

Species	Human

Dilution info	Use at an assay dependent concentration.
Notes	-

IP

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Expected

Species	Human
Dilution info	1-5 µg/mL
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

WB

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt (Intra)

Expected

Species	Human
Dilution info	1-5 µg/mL
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target data

See full target information IGKC

Function	Constant region of immunoglobulin light chains. Immunoglobulins, also known as antibodies, are membrane-bound or secreted glycoproteins produced by B lymphocytes. In the recognition phase of humoral immunity, the membrane-bound immunoglobulins serve as receptors which, upon binding of a specific antigen, trigger the clonal expansion and differentiation of B lymphocytes into immunoglobulins-secreting plasma cells. Secreted immunoglobulins mediate the effector phase of humoral immunity, which results in the elimination of bound antigens (PubMed:20176268, PubMed:22158414). The antigen binding site is formed by the variable domain of one heavy chain, together with that of its associated light chain. Thus, each immunoglobulin has two antigen binding sites with remarkable affinity for a particular antigen. The variable domains are assembled by a process called V-(D)-J rearrangement and can then be subjected to somatic hypermutations which, after exposure to antigen and selection, allow affinity maturation for a particular antigen (PubMed:17576170, PubMed:20176268).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The kappa light chain alternatively known as Ig kappa chain is a component of immunoglobulins which are important for immune response. This protein has a molecular mass of roughly 25 kDa. It predominantly expresses in B lymphocytes where it pairs with heavy chains to form antibodies. Its expression is indicative of mature B cell functions serving as a marker for certain types of immune cells. The kappa light chain can also be detected outside of cells circulating in the blood and other bodily fluids.
Biological function summary	Kappa light chains are integral to the structure and function of antibodies. As part of the immunoglobulin molecule these chains contribute to antigen specificity by combining with heavy chains. Together they form the antigen-binding site. The kappa light chain is not part of a multiprotein complex; rather it directly participates in the antibody response. The presence of either kappa or lambda light chains can determine the particularities of antibody characteristics.
Pathways	Kappa light chains are elements of the immunological pathways notably the adaptive immune response. They interact with other proteins like immunoglobulin heavy chains to neutralize pathogens. The constant region of the kappa chain plays a role in determining the isotype of immunoglobulins which affects how antibodies mediate immune effector functions. Cross-linking of surface immunoglobulin by antigens can trigger B cell activation an essential step in the adaptive immune system.
Associated diseases and disorders	Kappa light chains associate closely with multiple myeloma and certain types of lymphomas. Overproduction of kappa light chains in these diseases results in high levels detectable in the serum or urine which can be used diagnostically as markers. Also dysregulation of kappa chains correlates with autoimmune disorders whereby the immune system incorrectly targets its tissues. In disorders like these the interplay between kappa and lambda chains often arises showing imbalance between the two as a sign of abnormal B cell activity.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

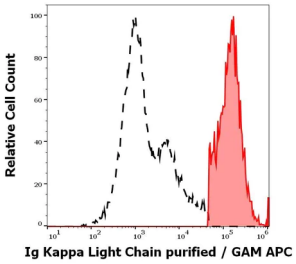
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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Terms & Conditions.

1 product image



Flow Cytometry - Anti-Kappa light chain antibody [MEM-09] (ab1050)

Kappa light chain Flow Cytometry staining using mouse Anti-Kappa light chain antibody

Flow cytometric analysis of human peripheral whole blood stained using ab1050 (concentration in sample 3 µg/ml) GAM APC showing separation of human Ig Kappa Light Chain positive lymphocytes (red-filled) from Ig Kappa Light Chain negative lymphocytes (black-dashed).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.