abcam

ab77275

FITC Anti-Lambda Light chain antibody [4C2]

Anti-Lambda Light chain antibody [4C2] conjugated to FITC - suitable for flow cytometry, and reacts with human samples. Clone [4C2] is a mouse monoclonal antibody.

Design your panel with our interactive flow cytometry panel builder. Click here.

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	FITC
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Clone number	4C2
Purification technique	Size-exclusion chromatography
Purification notes	ab77275 is conjugated with Fluorescein isothiocyanate (FITC) under optimumconditions. The reagent is free of unconjugated FITC and adjusted for direct use.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	20 µL for 10^6 Cells

Notes	ab91356 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. Use 20µl for 10^6 cells or 100µl whole blood.

Not recommended

Species	Guinea pig
Dilution info	-
Notes	ab91356 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. Use 20µl for 10^6 cells or 100µl whole blood.

Species	Hamster
Dilution info	-
Notes	ab91356 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. Use 20µl for 10^6 cells or 100µl whole blood.

Species	Goat
Dilution info	-
Notes	ab91356 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. Use 20µl for 10^6 cells or 100µl whole blood.

Species	Sheep
Dilution info	-
Notes	ab91356 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. Use 20µl for 10^6 cells or 100µl whole blood.

Species	Rabbit
Dilution info	-
Notes	ab91356 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. Use 20µl for 10^6 cells or 100µl whole blood.

Target data

See full target information IGLV1-51

Function	V region of the variable domain of immunoglobulin light chains that participates in the antigen recognition (PubMed:24600447). 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 conditions	+4°C
Appropriate long-term storage conditions	+4°C

Supplementary info

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

Activity summary	Lambda Light Chain also known as lambda chain or lambda protein forms a part of immunoglobulins (antibodies). Its mass typically ranges between 22 to 24 kDa. This protein is expressed primarily in B cells. Specifically it pairs with heavy chains to form the complete antibody molecule. It participates in the antigen recognition process supporting the immune system's defense mechanisms.
Biological function summary	Lambda Light Chain participates in immunological functions by contributing to the antigen-binding site of antibodies. It exists as a part of the immunoglobulin complex. The lambda chain alongside heavy chains forms the variable part of antibodies allowing specificity in antigen recognition. Its variation leads to a diverse antibody repertoire which is important for recognizing a wide range of pathogens.
Pathways	Lambda Light Chain fits into pathways involving adaptive immune responses. It is important in antigen processing and presentation pathways. In this context it interacts with the heavy chains which together drive the specificity and efficiency of immune response pathways. It also associates with proteins like the major histocompatibility complex (MHC) which facilitates antigen presentation to T cells.

Associated diseases and disorders	Lambda Light Chain associates with multiple myeloma a cancer of plasma cells and light chain amyloidosis a disorder where light chains accumulate as amyloid fibrils in tissues. In these conditions proteins like immunoglobulin heavy chain and albumin often interact with or are affected by lambda chains providing insights into disease mechanisms and potential targets for therapeutic intervention.

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

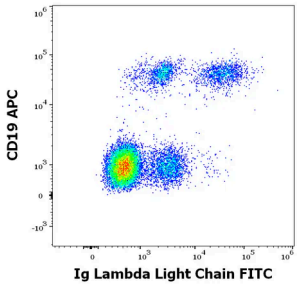
We do not recommend this combination. It is not covered by our product promise.

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.

Full details and terms and conditions can be found here:
Terms & Conditions.

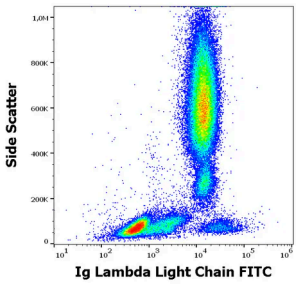
3 product images



Flow Cytometry - FITC Anti-Lambda Light chain antibody [4C2] (ab77275)

Lambda Light chain Flow Cytometry staining of Human lymphocytes using mouse Anti-Lambda Light chain antibody

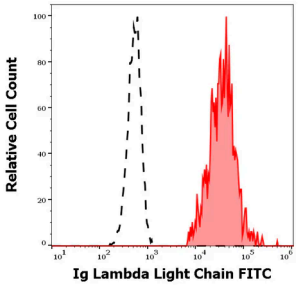
Flow cytometry multicolor surface staining of human lymphocytes stained using anti-human Ig lambda light chain (4C2) FITC antibody (20 µl reagent / 100 µl of peripheral whole blood) and anti-human CD19 (LT19) APC antibody (10 µl reagent / 100 µl of peripheral whole blood).



Flow Cytometry - FITC Anti-Lambda Light chain antibody [4C2] (ab77275)

Lambda Light chain Flow Cytometry staining of Human peripheral whole blood using mouse Anti-Lambda Light chain antibody

Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human Ig lambda light chain (4C2) FITC antibody (20 µl reagent / 100 µl of peripheral whole blood).



Flow Cytometry - FITC Anti-Lambda Light chain antibody [4C2] (ab77275)

Lambda Light chain Flow Cytometry staining of Human peripheral whole blood using mouse Anti-Lambda Light chain antibody

Separation of human Ig lambda light chain positive B-lymphocytes (red-filled) from Ig lambda light chain negative CD19 negative lymphocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human Ig lambda light chain (4C2) FITC antibody (20 µl reagent / 100 µl of peripheral whole blood).

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