abcam

ab124719

Anti-Lambda Light chain antibody [EPR5367-62]

Anti-Lambda Light chain antibody [EPR5367-62] (ab124719) is a rabbit monoclonal antibody detecting Lambda Light chain in **Western Blot, Flow Cytometry (Intra), IHC-P, ICC/IF, ELISA**. Suitable for **Human**.

- Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR5367-62
Purification technique	Affinity purification Protein A
Concentration	1.036 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/250 - 1/500

Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

ELISA

Tested

Species	Recombinant fragment - Human
Dilution info	1/64000
Notes	-

Expected

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

WB

Tested

Species	Human
Dilution info	1/20000
Notes	**For unpurified use at 1/50000 - 1/200000.**

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/250
Notes	**For unpurified use at 1/500 - 1/1000.**

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

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	Conditional Ambient
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	Stable for 12 months at -20°C

Notes

What is this antibody validated in?
Anti-Lambda Light chain antibody [EPR5367-62] (ab124719) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF), ELISA in Human samples.

What is the molecular weight of Lambda Light chain?
Anti-Lambda Light chain [EPR5367-62] (ab124719) specifically detects a band for Lambda Light chain (UniProt: P0CG04) at a molecular weight of 25kDa.

Other related products
We have a range of other formats of antibody clone [EPR5367-62] also available for your convenience: ab124719, Carrier free - ab185131, HRP - ab200966

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For

details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

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.

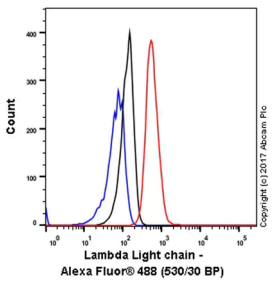
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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:
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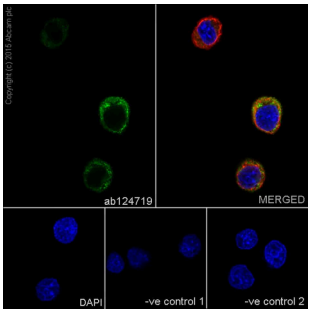
8 product images



Flow Cytometry (Intracellular) - Anti-Lambda Light chain antibody [EPR5367-62] (ab124719)

Lambda Light chain Flow Cytometry (Intracellular) staining using rabbit Anti-Lambda Light chain antibody

Intracellular Flow Cytometry analysis of Ramos (human Burkitt's lymphoma) cells labeling Lambda Light chain with unpurified ab124719 at 1/50 dilution (10ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluorr® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.

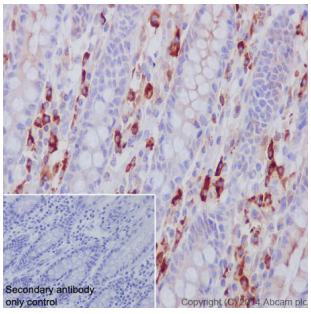


Immunocytochemistry/ Immunofluorescence - Anti-Lambda Light chain antibody [EPR5367-62] (ab124719)

Lambda Light chain Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Lambda Light chain antibody

Immunocytochemistry/Immunofluorescence analysis of Ramos cells labelling Lambda Light chain with purified ab124719 at 1/250. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/500) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain. ab7291, a mouse anti-tubulin (1/1000) and ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500) were also used.
Control 1: primary antibody (1/250) and secondary antibody, ab150120, an Alexa Fluor® 594-conjugated goat anti-mouse IgG (1/500).

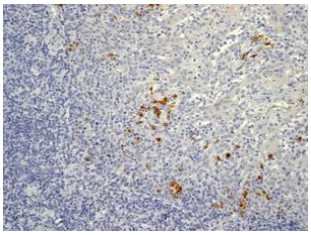
Control 2: ab7291 (1/1000) and secondary antibody, ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/500).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lambda Light chain antibody [EPR5367-62] (ab124719)

Lambda Light chain Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Lambda Light chain antibody

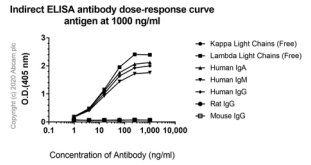
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human colon tissue labelling Lambda Light chain with purified ab124719 at 1/300. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. ab97051, a HRP-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/500). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Lambda Light chain antibody [EPR5367-62] (ab124719)

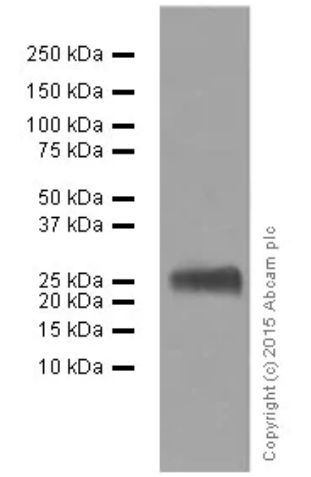
Lambda Light chain Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Lambda Light chain antibody

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human tonsil tissue labelling Lambda Light chain with unpurified ab124719 at a dilution of 1/250.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



ELISA - Anti-Lambda Light chain antibody [EPR5367-62] (ab124719)

ELISA analysis of Human Kappa light chain (Free), Human Lambda Light Chains (Free), Human IgA, Human IgM, Human IgG, Rat IgG, Mouse IgG at 1000 ng/mL with ab124719 at 1000~0ng/mL. An Alkaline Phosphatase-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) at 1/2500 dilution was used as the secondary antibody.



Western blot - Anti-Lambda Light chain antibody [EPR5367-62] (ab124719)

Lambda Light chain Western blot staining of Human thymus tissue lysate using rabbit Anti-Lambda Light chain antibody

Blocking and dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Lambda Light chain antibody [EPR5367-62] (ab124719) at 1/20000 dilution

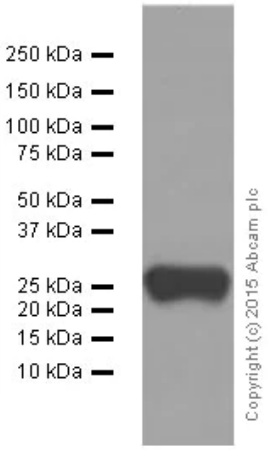
All lanes:
Human thymus tissue lysate at 20 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG, (H+L) at 1/1000 dilution

Predicted band size: 23 kDa

Observed band size: 25 kDa



Western blot - Anti-Lambda Light chain antibody [EPR5367-62] (ab124719)

Lambda Light chain Western blot staining of Human plasma lysate using rabbit Anti-Lambda Light chain antibody

Blocking and dilution buffer: 5% NFDM/TBST.
All lanes:
Western blot - Anti-Lambda Light chain antibody [EPR5367-62] (ab124719) at 1/100000 dilution

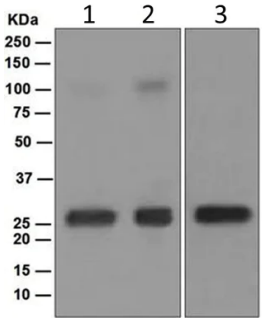
All lanes:
Human plasma lysate at 20 µg

Secondary

All lanes:
Peroxidase-conjugated goat anti-rabbit IgG, (H+L) at 1/1000 dilution

Predicted band size: 23 kDa

Observed band size: 25 kDa



Western blot - Anti-Lambda Light chain antibody [EPR5367-62] (ab124719)

All lanes:
Western blot - Anti-Lambda Light chain antibody [EPR5367-62] (ab124719) at 1/50000 dilution

Lane 1:
Human tonsil lysate at 10 µg

Lane 2:
Human plasma lysate at 10 µg

Lane 3:
Human spleen lysate at 10 µg

Secondary

All lanes:
HRP-conjugated goat anti-rabbit IgG at 1/2000 dilution

Predicted band size: 23 kDa, 49 kDa, 61 kDa

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