abcam

ab251608

Anti-CD4 antibody [CAL4] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	CAL4
Purification technique	Affinity purification Protein A
Concentration	1.002 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purity is greater than 99%.

Reactivity data

IP

Tested

Species	Mouse
Dilution info	-

Notes	-

Expected

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

WB

Tested

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-Fr

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	-
Notes	-

Expected

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

IHC-P

Tested

Species	Mouse
Dilution info	-
Notes	Not suitable for detecting mouse liver, mouse pancreas, and rat kidney tissue in IHC-P. Non-specific staining is primarily observed in mouse liver, mouse pancreas, and rat kidney tissues. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	Not suitable for detecting mouse liver, mouse pancreas, and rat kidney tissue in IHC-P. Non-specific staining is primarily observed in mouse liver, mouse pancreas, and rat kidney tissues. Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information Cd4

Function	Integral membrane glycoprotein that plays an essential role in the immune response and serves multiple functions in responses against both external and internal offenses. In T-cells, functions primarily as a coreceptor for MHC class II molecule:peptide complex. The antigens presented by class II peptides are derived from extracellular proteins while class I peptides are derived from cytosolic proteins. Interacts simultaneously with the T-cell receptor (TCR) and the MHC class II presented by antigen presenting cells (APCs). In turn, recruits the Src kinase LCK to the vicinity of the TCR-CD3 complex. LCK then initiates different intracellular signaling pathways by phosphorylating various substrates ultimately leading to lymphokine production, motility, adhesion and activation of T-helper cells. In other cells such as macrophages or NK cells, plays a role in differentiation/activation, cytokine expression and cell migration in a TCR/LCK-independent pathway. Participates in the development of T-helper cells in the thymus and triggers the differentiation of monocytes into functional mature macrophages.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab251608 is the carrier-free version of ab237722.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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.

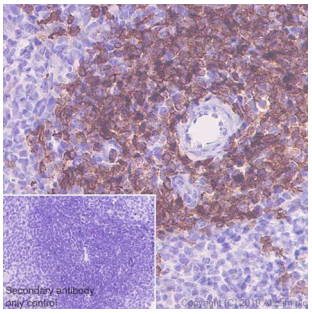
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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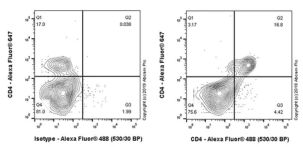
6 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD4 antibody [CAL4] - BSA and Azide free (ab251608)

CD4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD4 antibody

Immunohistochemical analysis of paraffin-embedded rat spleen tissue labeling CD4 with ab237722 at 1/4000 dilution, followed by ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on rat spleen. The section was incubated with ab237722 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.
This data was developed using the same antibody clone in a different buffer formulation containing PBS and sodium azide (ab237722).

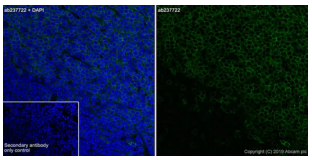


Flow Cytometry (Intracellular) - Anti-CD4 antibody [CAL4] - BSA and Azide free (ab251608)

CD4 Flow Cytometry (Intracellular) staining using rabbit Anti-CD4 antibody

Intracellular flow cytometric analysis of 2% paraformaldehyde-fixed, 0.1% Tween-20 permeabilized mouse splenocytes labeling CD4 with ab237722 at 1/40 (right panel) compared with a Rabbit monoclonal IgG (ab172730) (left panel). Goat anti rabbit IgG (Alexa Fluor® 488, ab150077), at 1/2000 dilution was used as the secondary antibody. Cells were surface stained with anti-CD4

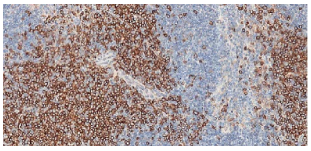
conjugated to Alexa Fluor® 647. Then fixed with 2% PFA for 10min and intracellularly stained with rabbit IgG (Left) or ab237722 (Right). They recognize the same cell population.
This data was developed using the same antibody clone in a different buffer formulation containing PBS and sodium azide (ab237722).



Immunohistochemistry (Frozen sections) - Anti-CD4 antibody [CAL4] - BSA and Azide free (ab251608)

CD4 Immunohistochemistry (Frozen sections) staining using rabbit Anti-CD4 antibody

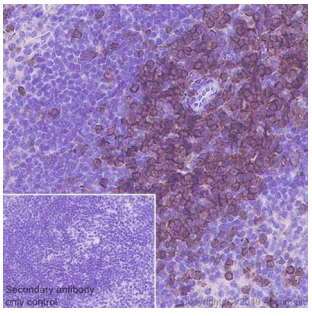
Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen mouse spleen tissue labeling CD4 with ab237722 at 1/100 dilution (green), followed by ab150077 AlexaFluor®488 Goat anti-Rabbit secondary at a 1/1,000 dilution. Positive staining on T cell surface (PMID: 26994219) is observed. Counterstained with DAPI (blue). Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ab150077 AlexaFluor®488 Goat anti-Rabbit used at a 1/1,000 dilution. Heat mediated antigen retrieval using sodium citrate buffer (10 mM citrate pH 6.0 and 0.05% Tween-20).
This data was developed using the same antibody clone in a different buffer formulation containing PBS and sodium azide (ab237722).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD4 antibody [CAL4] - BSA and Azide free (ab251608)

CD4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD4 antibody

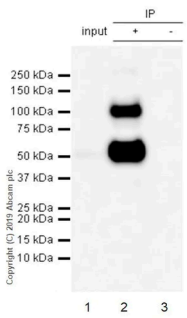
Formalin-fixed, paraffin-embedded mouse spleen tissue stained for CD4 using ab237722 at 0.5 µg/ml in immunohistochemical analysis.
This data was developed using the same antibody clone in a different buffer formulation containing PBS and sodium azide (ab237722).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD4 antibody [CAL4] - BSA and Azide free (ab251608)

CD4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD4 antibody

Immunohistochemical analysis of paraffin-embedded mouse spleen tissue labeling CD4 with ab237722 at 1/4000 dilution, followed by ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on mouse spleen. The section was incubated with ab237722 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with hematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.
This data was developed using the same antibody clone in a different buffer formulation containing PBS and sodium azide (ab237722).



Immunoprecipitation - Anti-CD4 antibody [CAL4] - BSA and Azide free (ab251608)

CD4 was immunoprecipitated from 0.35 mg mouse thymus lysate with ab237722 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab237722 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used at 1/5000 dilution.
Lane 1: Mouse thymus lysate 10 µg (Input).
Lane 2: ab237722 IP in mouse thymus lysate .
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab237722 in mouse thymus lysate .
Blocking/Dilution buffer: 5% NFDM/TBST.
Exposure time: 30 seconds.
102kDa band represents CD4 dimer based on literature. (PMID: 20739067).

This data was developed using the same antibody clone in a different buffer formulation containing PBS and sodium azide (ab237722).

All lanes:
Immunoprecipitation - Anti-CD4 antibody [CAL4] (ab237722)

Predicted band size: 51 kDa

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