

## Product datasheet

### Anti-CD4 antibody [EPR19514] ab183685

Recombinant RabMAb

★★★★★ [20 Abreviews](#) [263 References](#) [19 Images](#)

#### Overview

<b>Product name</b>	Anti-CD4 antibody [EPR19514]
<b>Description</b>	Rabbit monoclonal [EPR19514] to CD4
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> IP, IHC-P, IHC-Fr, WB
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse
<b>Immunogen</b>	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: Mouse thymus, liver, brain and kidney tissue lysates; Raw264.7 and NIH/3T3 cell lysates IHC-P: Mouse spleen, colon, brain, cerebrum, lung and thymus tissues; mammary tumor tissue IHC-Fr: Mouse spleen and liver tissue. IP: Mouse thymus whole cell lysate.
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> <li>- High batch-to-batch consistency and reproducibility</li> <li>- Improved sensitivity and specificity</li> <li>- Long-term security of supply</li> <li>- Animal-free production</li> </ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p>

#### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	<p>pH: 7.2</p> <p>Preservative: 0.01% Sodium azide</p> <p>Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA</p>
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR19514

Isotype

IgG

## Applications

### The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab183685 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
IP		1/40.
IHC-P	★★★★★ (14)	1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
IHC-Fr	★★★★★ (4)	1/200.
WB	★★★★★ (1)	1/1000. Detects a band of approximately 51 kDa (predicted molecular weight: 51 kDa).

## Target

### Function

Accessory protein for MHC class-II antigen/T-cell receptor interaction. May regulate T-cell activation. Induces the aggregation of lipid rafts.

### Sequence similarities

Contains 3 Ig-like C2-type (immunoglobulin-like) domains.  
Contains 1 Ig-like V-type (immunoglobulin-like) domain.

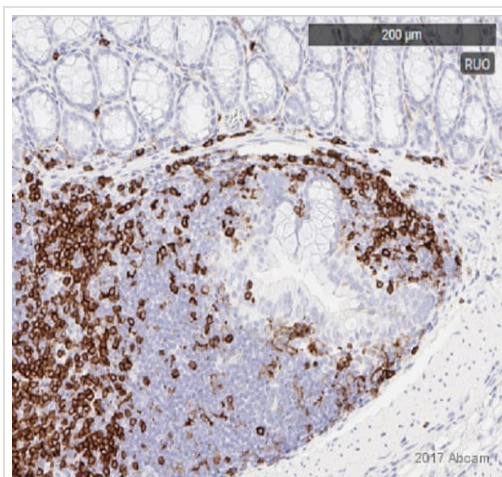
### Post-translational modifications

Palmitoylation and association with LCK contribute to the enrichment of CD4 in lipid rafts.

### Cellular localization

Cell membrane. Localizes to lipid rafts. Removed from plasma membrane by HIV-1 Nef protein that increases clathrin-dependent endocytosis of this antigen to target it to lysosomal degradation. Cell surface expression is also down-modulated by HIV-1 Envelope polyprotein gp160 that interacts with, and sequesters CD4 in the endoplasmic reticulum.

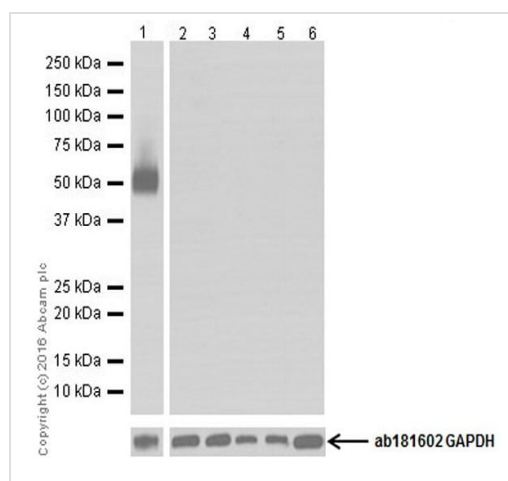
## Images



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

[EPR19514] (ab183685)

Verified customer



Western blot - Anti-CD4 antibody [EPR19514]

(ab183685)

Formaldehyde-fixed, non-permeabilized mouse colon tissue stained for CD4 with ab183685 (30 mins at a 1/500 dilution) in immunohistochemical analysis. A Rabbit polyclonal HRP conjugate was used as the secondary.

Heat mediated antigen retrieval buffer/enzyme used: pH 9.0 EDTA.

Blocking step: 1% **ab64226** for 10 mins at RT.

**All lanes** : Anti-CD4 antibody [EPR19514] (ab183685) at 1/2000 dilution

**Lane 1** : Mouse thymus lysate

**Lane 2** : Mouse liver tissue lysate

**Lane 3** : Mouse brain tissue lysate

**Lane 4** : Mouse kidney tissue lysate

**Lane 5** : Raw264.7 (mouse abelson murine leukemia virus-induced tumor) whole cell lysate

**Lane 6** : NIH/3T3 (mouse embryo) whole cell lysate

Lysates/proteins at 20 μg per lane.

### Secondary

**All lanes** : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

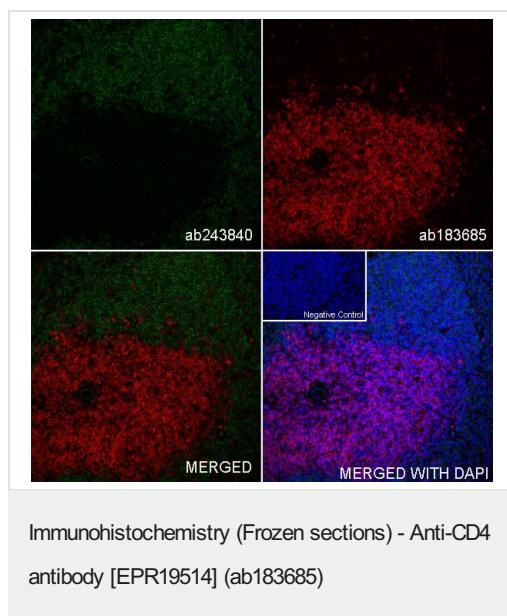
**Predicted band size:** 51 kDa

**Observed band size:** 51 kDa

The expression profile observed is consistent with what has been described in the literature (PMID: 2155425).

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1:3 seconds; Lanes 2,3,4,5 and 6:30 seconds

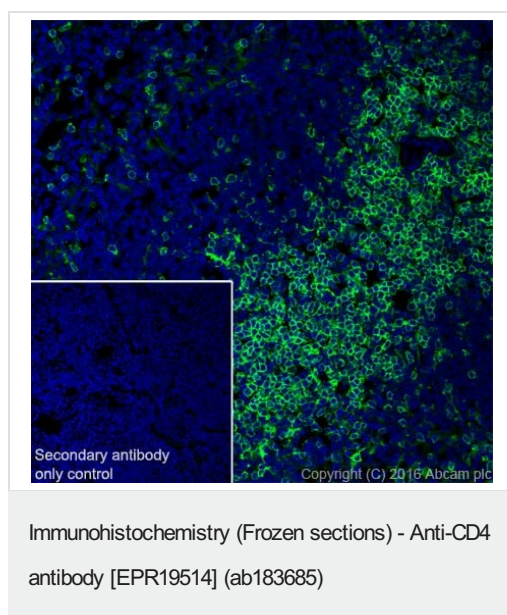


IHC image of CD4 staining in a section of frozen normal Mouse Spleen.

The section was fixed using 10% formaldehyde in 1XPBS for 10 minutes. No antigen retrieval step was performed prior to staining. Non-specific protein-protein interactions were then blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M glycine and 1% (w/v) BSA for 1h at room temperature. The section was then incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with ab183685 (Rabbit monoclonal [EPR19514] to CD4) at 1/200 and **ab243840** at 1µg/ml, to show the distinct staining of B cells and T cells. The section was then incubated with **ab150165** (Goat Anti-Rat IgG H&L (Alexa Fluor® 488) preabsorbed, (Shown in green) 1/1000) and **ab150080** (Goat Anti-Rabbit IgG H&L (Alexa Fluor®594) (Shown in red) 1/1000) for 1 hour at room temperature. The secondary-only control insert image is taken from an identical assay without primary antibody. DAPI was used to stain the cell nuclei (blue). The section was then mounted using Fluoromount®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

For IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antibody concentrations and incubation times.



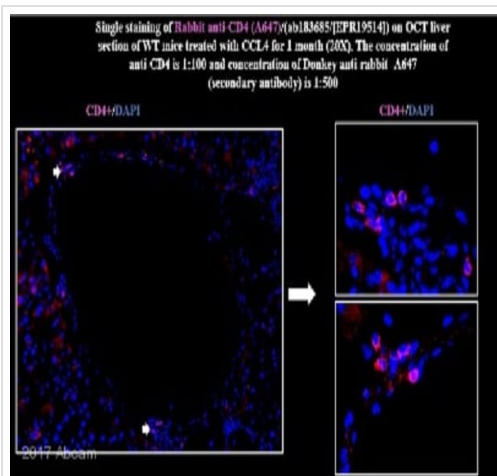
Immunohistochemical analysis of 4% paraformaldehyde-fixed, 0.2% Triton X-100 permeabilized frozen Mouse spleen tissue labeling CD4 with ab183685 at 1/500 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green).

The result showed membrane staining on mouse spleen.

The nuclear counterstain is DAPI (blue).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is **ab150077** at 1/1000 dilution.

Antigen retrieval: Heated citrate solution (10mM citrate pH 6.0 + 0.05% Tween-20).

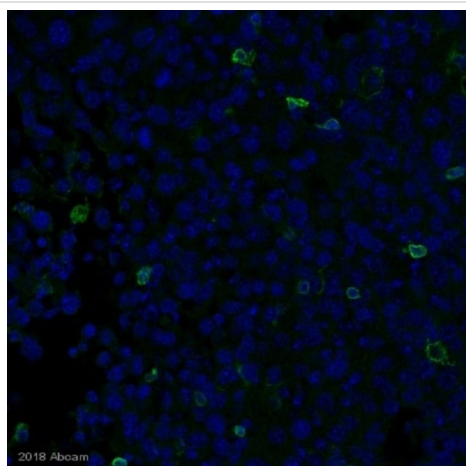


Immunohistochemistry (Frozen sections) - Anti-CD4 antibody [EPR19514] (ab183685)

Verified customer

Paraformaldehyde-fixed, 0.1% Tween 0.3% Triton in PBS permeabilized mouse liver tissue stained for CD4 with ab183685 (12 hours, 4°C at a 1/100 dilution) in immunohistochemical analysis. A Donkey anti Rabbit IgG (H+L) AlexaFluor®647 was used as the secondary at a 1/500 dilution (red).

Blocking step: 1% BSA for 12 hours at 4°C.



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

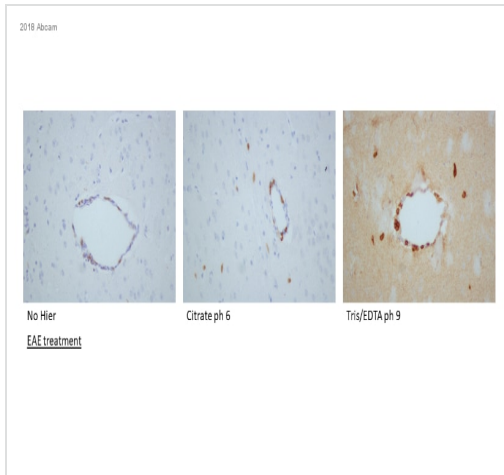
[EPR19514] (ab183685)

Anugraha Rajagopalan

Formalin-fixed, 0.2% Triton-X permeabilized mouse Eo771 mammary tumor tissue stained for CD4 with ab183685 (18 hours, 4°C at a 1/1000 dilution) in immunohistochemical analysis. A Goat anti Rabbit IgG (H&L) polyclonal AlexaFluor®488 conjugate was used as the secondary (green).

Heat mediated antigen retrieval buffer/enzyme used: Citrate buffer.

Blocking step: 4% BSA for 1 hour at 25°C.

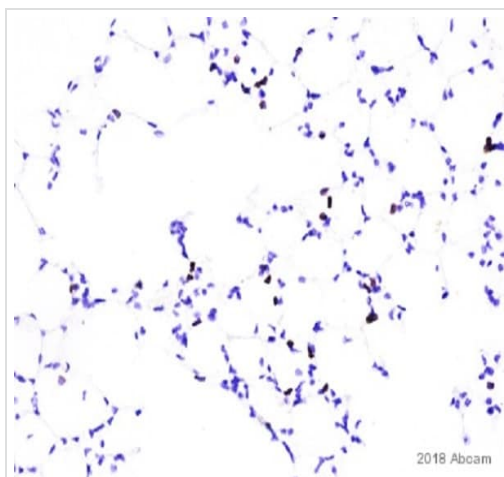


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD4 antibody  
[EPR19514] (ab183685)  
Herr Dr. Markus Kipp

Formaldehyde-fixed, non-permeabilized mouse brain tissue stained for CD4 with ab183685 (14 hours, 4°C at a 1/1000 dilution) in immunohistochemical analysis. A Goat anti Rabbit IgG monoclonal HRP conjugate was used as the secondary at a 1/200 dilution.

Blocking step: 5% normal goat serum for 1 hour at 26°C.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



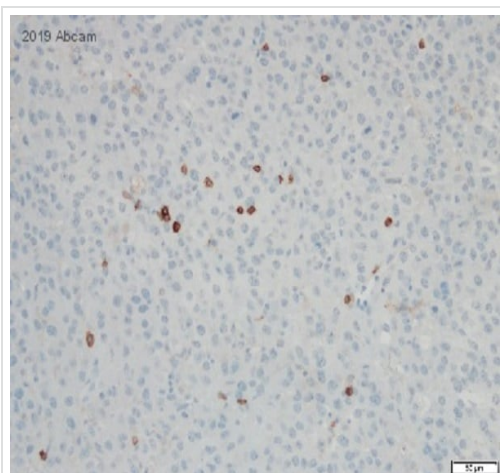
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD4 antibody  
[EPR19514] (ab183685)  
Verified customer

Formaldehyde-fixed, paraffin-embedded mouse lung tissue stained for CD4 with ab183685 (18 hours, 4°C at a 1/1000 dilution) in immunohistochemical analysis. A Goat anti Rabbit IgG polyclonal HRP conjugate was used as the secondary at a 1/250 dilution (red).

Heat mediated antigen retrieval buffer/enzyme used: Citrate buffer pH 6.0.

Blocking step: 10% serum for 1 hour at 25°C.





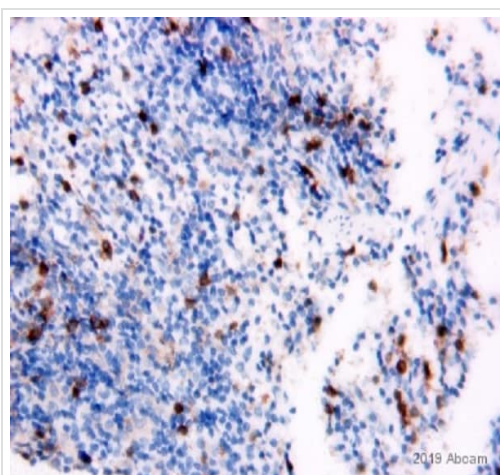
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD4 antibody

[EPR19514] (ab183685)

Verified customer

Formaldehyde-fixed, 3% hydrogen peroxide permeabilized B16F10 (melanoma) syngeneic mouse tumor tissue stained for CD4 with ab183685 (36mins, 37°C at a 1/1000 dilution) in immunohistochemical analysis. A Goat anti Rabbit IgG polyclonal HRP conjugate was used as the secondary.

Heat mediated antigen retrieval buffer/enzyme used: Tris/EDTA.



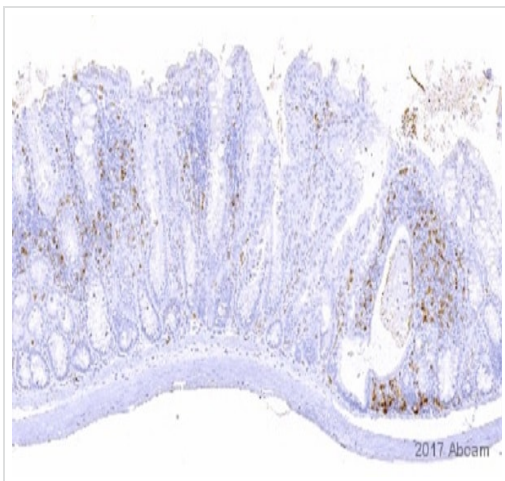
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD4 antibody

[EPR19514] (ab183685)

Zohar Gavish

Formaldehyde-fixed, non-permeabilized mouse spleen tissue stained for CD4 with ab183685 (30mins at a 1/1000 dilution) in immunohistochemical analysis. A Goat polyclonal HRP conjugate was used as the secondary.

Heat mediated antigen retrieval buffer/enzyme used: Leica ER2 solution.

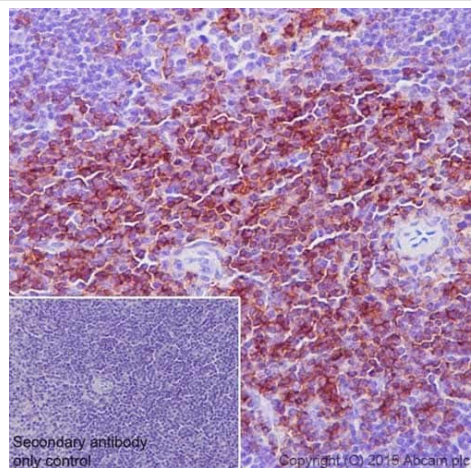


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD4 antibody  
[EPR19514] (ab183685)  
Verified customer

Formaldehyde-fixed mouse colon, chronic mucosal inflammation tissue stained for CD4 with ab183685 (90 mins at a 1/1000 dilution) in immunohistochemical analysis. A Goat polyclonal biotin conjugate was used as the secondary.

Heat mediated antigen retrieval buffer/enzyme used: High pH CC1.

Blocking step: 1% BSA for 40 mins at 24°C.

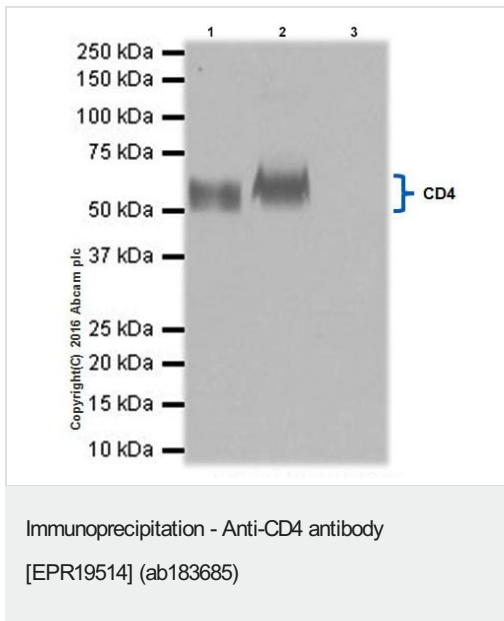


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD4 antibody  
[EPR19514] (ab183685)

Immunohistochemical analysis of paraffin-embedded Mouse spleen tissue labeling CD4 with ab183685 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution. Membrane staining on T cells is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is [ab97051](#) at 1/500 dilution. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.





CD4 was immunoprecipitated from 1mg of Mouse thymus whole cell lysate with ab183685 at 1/40 dilution.

Western blot was performed from the immunoprecipitate using ab183685 at 1/1000 dilution.

VeriBlot for IP Detection Reagent (HRP) ([ab131366](#)), was used for detection at 1/10000 dilution.

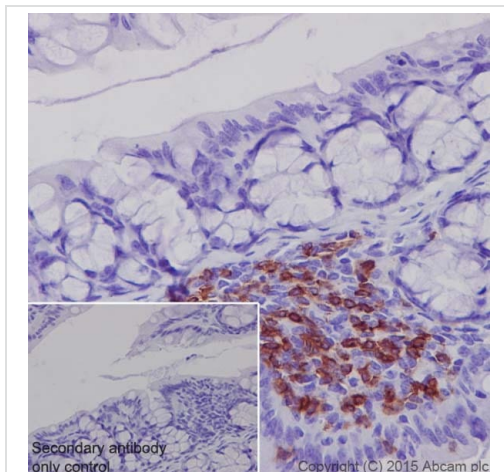
Lane 1: Mouse thymus whole cell lysate, 10µg (Input).

Lane 2: ab183685 IP in Mouse thymus whole cell lysate.

Lane 3: Rabbit IgG, monoclonal [EPR25A] - Isotype Control ([ab172730](#)) instead of ab183685 in Mouse thymus whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 5 seconds.

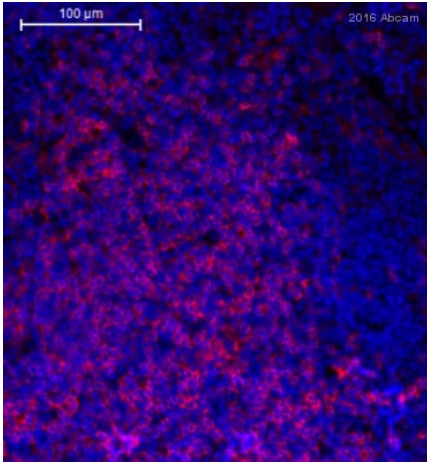


Immunohistochemical analysis of paraffin-embedded Mouse colon tissue labeling CD4 with ab183685 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/500 dilution. Membrane staining on lymphocytes and negative on epithelium cells of mouse colon is observed.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is [ab97051](#) at 1/500 dilution.

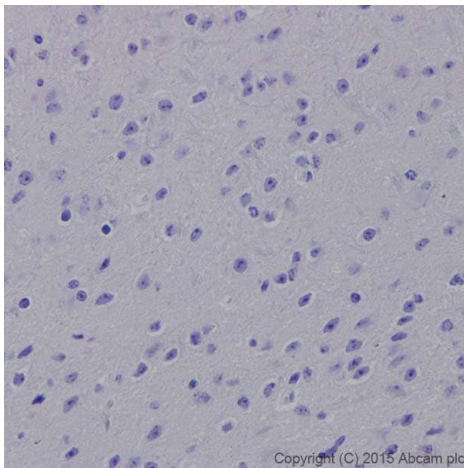
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



10% NBF-fixed, paraffin-embedded mouse spleen tissue stained for CD4 using ab183685 at 1/2000 dilution in immunohistochemical analysis, followed by Goat anti-Rabbit IgG Alexa Fluor® 647.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD4 antibody  
[EPR19514] (ab183685)

This image is courtesy of an anonymous Abreview.



Immunohistochemical analysis of paraffin-embedded Mouse cerebrum tissue labeling CD4 with ab183685 at 1/1000 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

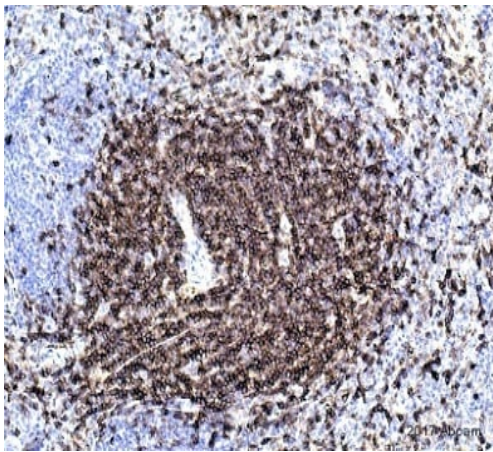
Negative on mouse cerebrum.

Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is **ab97051** at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD4 antibody  
[EPR19514] (ab183685)

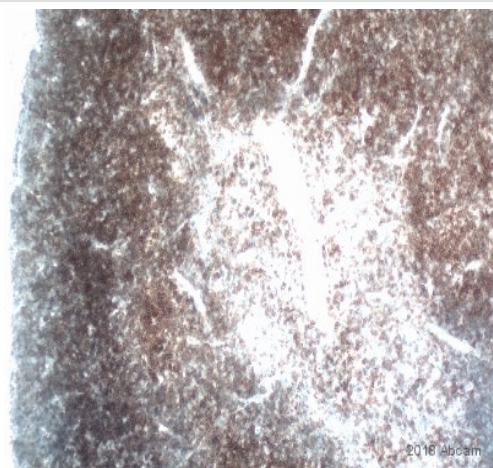


Formaldehyde-fixed, paraffin-embedded mouse spleen tissue stained for CD4 using ab183685 at 1/2000 dilution in immunohistochemical analysis, followed by Goat anti Rabbit IgG Biotin.

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

[EPR19514] (ab183685)

This image is courtesy of an Abreview submitted by Mr. Carl Hobbs.



Formaldehyde-fixed, paraffin-embedded mouse thymus tissue stained for CD4 using ab183685 at 1/500 dilution in immunohistochemical analysis.

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

[EPR19514] (ab183685)

This image is courtesy of an anonymous Abreview.

### Why choose a recombinant antibody?



**Research with confidence**  
Consistent and reproducible results



**Long-term and scalable supply**  
Recombinant technology



**Success from the first experiment**  
Confirmed specificity



**Ethical standards compliant**  
Animal-free production

Anti-CD4 antibody [EPR19514] (ab183685)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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- Replacement or refund for products not performing as stated on the datasheet
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- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

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