Product datasheet

Anti-CD4 antibody [EPR19514] ab183685

Overview

Product name
Anti-CD4 antibody [EPR19514]

Description
Rabbit monoclonal [EPR19514] to CD4

Host species
Rabbit

Tested applications
Suitable for: IP, IHC-P, IHC-Fr, WB

Species reactivity
Reacts with: Mouse

Immunogen
Recombinant fragment within Mouse CD4 aa 1-400. The exact sequence is proprietary. Database link: P06332

Positive control
WB: Mouse thymus lysate; EL4 whole cell lysate. IHC-P: Mouse spleen, colon and thymus tissues. IHC-Fr: Mouse spleen tissue. IP: Mouse thymus whole cell lysate.

General notes
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents. This product is a recombinant rabbit monoclonal antibody.

Properties

Form
Liquid

Storage instructions

Storage buffer
Preservative: 0.01% Sodium azide
Constituents: 59% PBS, 40% Glycerol, 0.05% BSA

Purity
Protein A purified

Clonality
Monoclonal

Clone number
EPR19514

Isotype
IgG

Applications

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.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP</td>
<td></td>
<td>1/40.</td>
</tr>
<tr>
<td>IHC-P</td>
<td>☀️☀️☀️☀️</td>
<td>1/1000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.</td>
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<tr>
<td>IHC-Fr</td>
<td>☀️☀️☀️☀️</td>
<td>1/200.</td>
</tr>
<tr>
<td>WB</td>
<td>☀️☀️☀️☀️</td>
<td>1/1000. Detects a band of approximately 51 kDa (predicted molecular weight: 51 kDa).</td>
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</table>

**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**

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.
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.

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.
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.
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
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 secondary antibody (HRP) (ab131366), was used as secondary antibody 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.

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

This image is courtesy of an anonymous Abreview.
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD4 antibody

[EPR19514] (ab183685)

This image is courtesy of an anonymous Abreview.

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.

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