abcam

ab219411

Anti-CD2 antibody [EPR21825]

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	EPR21825
Purification technique	Affinity purification Protein A
Concentration	0.45 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	1/500
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/2000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information Cd2

Function	CD2 interacts with lymphocyte function-associated antigen CD58 (LFA-3) and CD48/BCM1 to mediate adhesion between T-cells and other cell types. CD2 is implicated in the triggering of T-cells, the cytoplasmic domain is implicated in the signaling function.

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	Avoid freeze / thaw cycle

Notes

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.

Supplementary info

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

Activity summary	CD2 also known as T11 or LFA-2 acts as a cell surface glycoprotein expressed mainly on T-cells natural killer cells and thymocytes. This protein has a molecular mass of approximately 50-55 kDa. CD2 plays a critical role in facilitating cell-cell adhesion and signal transduction. It serves as a receptor for the CD58 ligand on antigen-presenting cells supporting the interaction between T-cells and these cells. By enhancing adhesion CD2 contributes to the formation of the immunological synapse necessary for effective immune response.
Biological function summary	The functioning of CD2 helps in the modulation of immune responses and T-cell activation. CD2 participates in signal transduction leading to cytokine production and proliferation. It is associated with the immunological synapse complex working closely with other surface molecules like Lck and CD3 to promote T-cell responses. This collaboration is vital for the development and function of immune cells driving adaptive immunity.
Pathways	CD2 engages in pathways integral to T-cell activation and signal transduction. A well-known pathway involving CD2 is the TCR (T-cell Receptor) signaling pathway where it partners with CD3 to initiate T-cell activation. Additionally CD2 influences the LAT (Linker for Activation of T-cells) pathway contributing to downstream

	signaling cascades that involve various signaling proteins such as Lck and ZAP-70 ensuring proper T-cell function.
Associated diseases and disorders	CD2 shows connections to autoimmune diseases and cancers. For instance its involvement in abnormal T-cell activation links CD2 to autoimmune conditions like rheumatoid arthritis. Also various leukemias demonstrate altered CD2 expression suggesting a role in cancer pathogenesis. Through these disease states CD2's interaction with the CD58 protein becomes critical as this interaction affects the activity of T-cells in the disease milieu influencing disease progression and treatment outcomes.

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

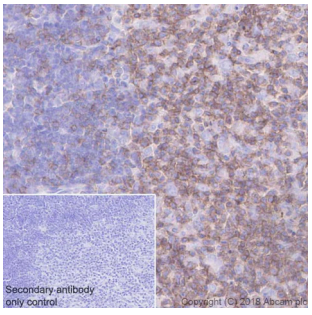
We do not recommend this combination. It is not covered by our product promise.

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.

5 product images



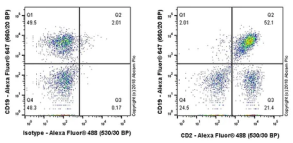
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD2 antibody [EPR21825] (ab219411)

CD2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD2 antibody

Immunohistochemical analysis of paraffin-embedded mouse thymus tissue labeling CD2 with ab219411 at 1/2000 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Cytoplasmic staining in mouse thymus (PMID: 2901356) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

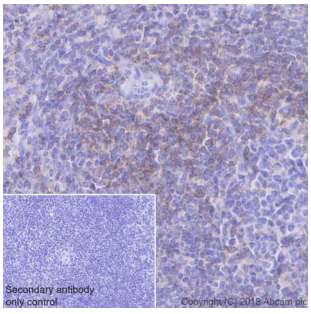
Perform heat-mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).



Flow Cytometry - Anti-CD2 antibody [EPR21825] (ab219411)

CD2 Flow Cytometry staining using rabbit Anti-CD2 antibody

Flow cytometric analysis of mouse primary splenocytes labeling CD2 with ab219411 at 1/500 dilution (right panel) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (left panel). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.
Cells were surface stained with anti-mouse CD19-Alexa Fluor®647 and rabbit IgG (left) / ab219411 (right). Gated on total viable cells.

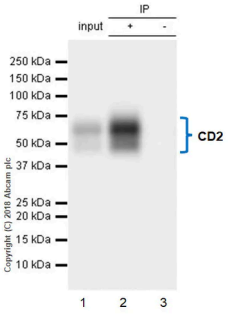


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD2 antibody [EPR21825] (ab219411)

CD2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-CD2 antibody

Immunohistochemical analysis of paraffin-embedded mouse spleen tissue labeling CD2 with ab219411 at 1/2000 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP).
Cytoplasmic staining in mouse spleen (PMID: 2901356) is observed. Counter stained with hematoxylin.
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat-mediated antigen retrieval using ab93684 (Tris/EDTA buffer, pH 9.0).



Immunoprecipitation - Anti-CD2 antibody [EPR21825] (ab219411)

CD2 was immunoprecipitated from 0.35 mg of mouse thymus lysate with ab219411 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab219411 at 1/1,000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10,000 dilution.
Lane 1: Mouse thymus lysate 10 µg (Input).

Lane 2: ab219411 IP in mouse thymus lysate.

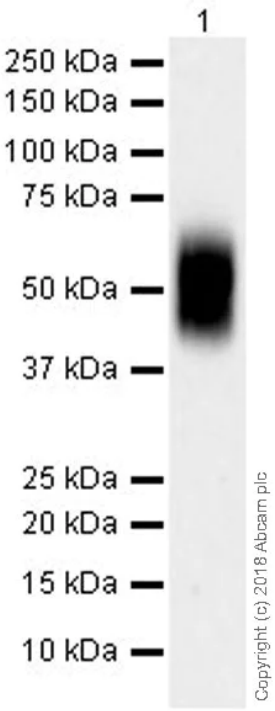
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab219411 in mouse thymus lysate.

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

Exposure time: 3 seconds.

All lanes:
Immunoprecipitation - Anti-CD2 antibody [EPR21825] (ab219411)

Predicted band size: 39 kDa



Western blot - Anti-CD2 antibody [EPR21825] (ab219411)

Blocking/Dilution buffer: 5% NFDM/TBST.
Molecular mass is consistent with the literature (PMID 10510361).

All lanes:
Western blot - Anti-CD2 antibody [EPR21825] (ab219411) at 1/1000 dilution

All lanes:
Mouse thymus lysate at 20 µg

Secondary

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

Developed using the ECL technique.

Predicted band size: 39 kDa

Observed band size: 45-58 kDa

Exposure time: 3min

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