abcam

ab322943

Alexa Fluor® 488 Anti-CD2 antibody [EPR27426-17]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 488
Excitation/Emission	Ex: 495nm, Em: 519nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR27426-17
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human

Dilution info	1/50
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/500
Notes	-

IHC-P

Expected

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

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	Blue Ice
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, Store in the dark

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.

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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

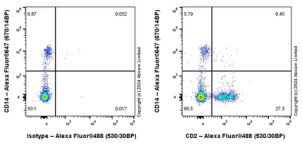
We do not recommend this combination. It is not covered by our product promise.

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.

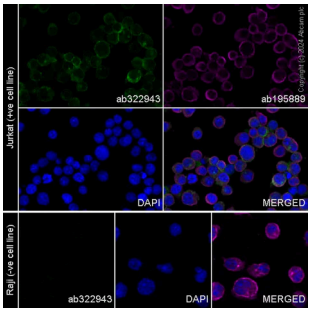
4 product images



Flow Cytometry - Alexa Fluor® 488 Anti-CD2 antibody [EPR27426-17] (ab322943)

Flow cytometric analysis of Human PBMC (human peripheral blood mononuclear cell) cells labelling CD2 with ab322943 at 1/500 dilution (0.1ug) / Right compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 488) (ab199091) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Cells are co-stained with CD14 conjugated to Alexa Fluor®647.
Gated on viable cells.

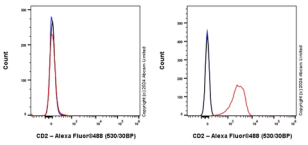


Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 488 Anti-CD2 antibody [EPR27426-17] (ab322943)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized Jurkat (human T cell leukemia T lymphocyte from peripheral blood) cells labelling CD2 with ab322943 at 1/50 (10.0 ug/ml) dilution (Green).

Confocal image showing membranous and cytoplasmic staining in Jurkat cell line (shown in green).
The counterstain was observed in magenta. Nuclear DNA was labeled with DAPI (shown in blue).
Negative control: Raji (PMID:19494291)
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

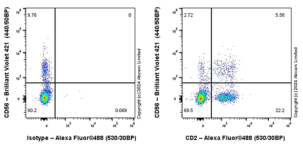
ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Magenta). The Nuclear counterstain was DAPI (Blue).



Flow Cytometry - Alexa Fluor® 488 Anti-CD2 antibody [EPR27426-17] (ab322943)

Flow cytometric analysis of Raji (human Burkitt's lymphoma B lymphocyte, Left) / Jurkat (human T cell leukemia T lymphocyte from peripheral blood, Right) cells labelling CD2 with ab322943 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 488) (ab199091) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).

Negative control: Raji.
Gated on viable cells.



Flow Cytometry - Alexa Fluor® 488 Anti-CD2 antibody [EPR27426-17] (ab322943)

Flow cytometric analysis of Human PBMC (human peripheral blood mononuclear cell) cells labelling CD2 with ab322943 at 1/500 dilution (0.1ug) / Right compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 488) (ab199091) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Cells are co-stained with CD56 conjugated to Brilliant Violet 421.
Gated on viable cells.

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