abcam

ab77138

PE Anti-CD2 antibody [LT2]

Anti-CD2 antibody [LT2] conjugated to PE - suitable for flow cytometry, and reacts with human samples. Clone [LT2] is a mouse monoclonal antibody cited in 8 publications.

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Key facts

Isotype	IgG2b
Host species	Mouse
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.097% Sodium azide Constituents: PBS, 0.2% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing CD2 protein. The exact immunogen used to generate this antibody is proprietary information. Database link P06729
Clone number	LT2
Purification technique	Size-exclusion chromatography
Specificity	The antibody reacts with CD2, a 50 kDa glycoprotein present on the human peripheral blood T lymphocytes and NK cells; also expressed by all thymocytes.
Purification notes	The conjugate is purified by size exclusion chromatography and adjusted for direct use. Purity >95% by SDS-PAGE.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	20 µL for 10^6 Cells
Notes	Use 20 µl reagent / 100 µl of whole blood or 10^6 cells in a suspension.

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 conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

The purified antibody is conjugated with R-Phycoerythrin (PE) under optimum conditions.

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

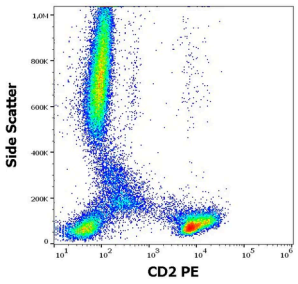
We do not recommend this combination. It is not covered by our product promise.

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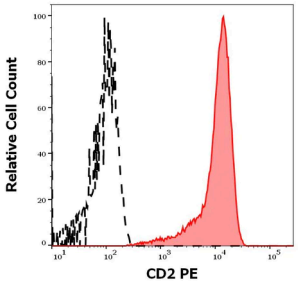
3 product images



Flow Cytometry - PE Anti-CD2 antibody [LT2] (ab77138)

CD2 Flow Cytometry staining of Human peripheral blood using mouse Anti-CD2 antibody

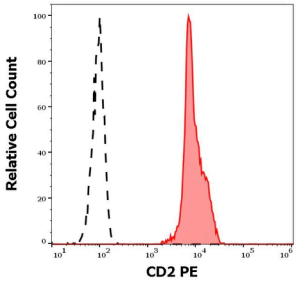
Flow cytometry surface staining pattern of human peripheral whole blood stained using ab77138 (20 µl reagent / 100 µl of peripheral whole blood).



Flow Cytometry - PE Anti-CD2 antibody [LT2] (ab77138)

CD2 Flow Cytometry staining of MOLT-4 cells using mouse Anti-CD2 antibody

Separation of MOLT-4 cells stained using ab77138 (concentration in sample 4 µg/m, red-filled) from MOLT-4 cells stained using mouse IgG1 isotype control (MOPC-21) PE antibody (concentration in sample 4 µg/ml, same as ab77138 concentration, black-dashed) in flow cytometry analysis (surface staining).



Flow Cytometry - PE Anti-CD2 antibody [LT2] (ab77138)

CD2 Flow Cytometry staining of Human peripheral blood using mouse Anti-CD2 antibody

Separation of human CD2 positive lymphocytes (red-filled) from neutrophil granulocytes (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using ab77138 (20 µl reagent / 100 µl of peripheral whole blood).

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