

Anti-CD2 Antibody Picoband®

Catalog Number: A00570-3

About CD2

CD2 (cluster of differentiation 2) is a cell adhesion molecule found on the surface of T cells and natural killer (NK) cells. It has also been called T-cell surface antigen T11/Leu-5, LFA-2, LFA-3 receptor, erythrocyte receptor and rosette receptor. Monoclonal antibodies directed against CD2 inhibit the formation of rosettes with sheep erythrocytes, indicating that CD2 is the erythrocyte receptor or is closely associated with it. CD2 is one of the earliest T-cell markers, being present on more than 95% of thymocytes. Due to its structural characteristics, CD2 is a member of the immunoglobulin superfamily; it possesses two immunoglobulin-like domains in its extracellular portion. The localization of CD2 to 1p13 is established by in situ hybridization. CD2 interacts with other adhesion molecules, such as lymphocyte function-associated antigen-3 (LFA-3/CD58) in humans, or CD48 in rodents, which are expressed on the surfaces of other cells. With the use of transgenic mice, such an LCR is identified within the 3-prime flanking region of the human CD2 gene.

Overview

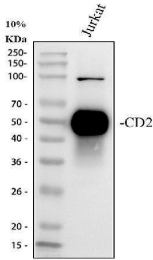
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| Product Name | Anti-CD2 Antibody Picoband® |
| Reactive Species | Human |
| Description | Boster Bio Anti-CD2 Antibody Picoband® catalog # A00570-3. Tested in ELISA, Flow Cytometry, IP, IHC, WB applications. This antibody reacts with Human. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance. |
| Application | ELISA, Flow Cytometry, IP, IHC, WB |
| Clonality | Polyclonal |
| Formulation | Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ . |
| Storage Instructions | At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing. |
| Host | Rabbit |
| Uniprot ID | P06729 |

Technical Details

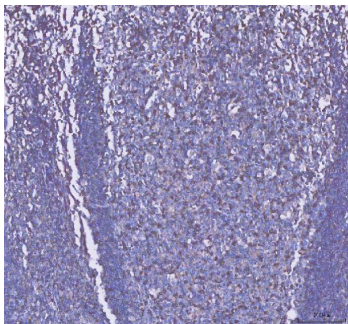
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|-------------------------------|---|
| Immunogen | E.coli-derived human CD2 recombinant protein (Position: V23-D209). |
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot. |
| Cross Reactivity | No cross-reactivity with other proteins. |
| Isotype | Rabbit IgG |

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| Form | Lyophilized |
| Concentration | Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml. |
| Purification | Immunogen affinity purified. |
| Suggested Dilutions | Western blot, 0.1-0.25 ug/ml, Human Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human Immunoprecipitation, 0.5-2 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10 ⁶ cells, Human ELISA, 0.1-0.5 ug/ml, - |

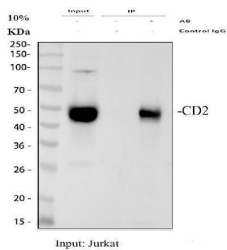
Anti-CD2 Antibody Picoband® (A00570-3) Images



Western blot analysis of CD2 using anti-CD2 antibody (A00570-3). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Jurkat whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-CD2 antigen affinity purified polyclonal antibody (A00570-3) at 0.25 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for CD2 at approximately 48-55 kDa. The expected band size for CD2 is at 39 kDa.

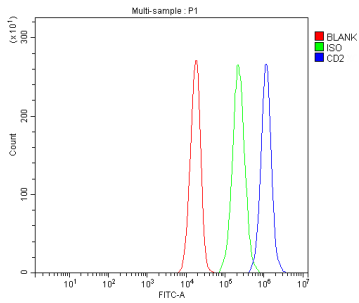


IHC analysis of CD2 using anti-CD2 antibody (A00570-3). CD2 was detected in a paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD2 Antibody (A00570-3) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



Immunoprecipitating (IP) CD2 in Jurkat whole cell lysate. Western blot analysis of CD2 using anti-CD2 antibody (A00570-3); Lane 1: Jurkat whole cell lysates (30ug); Lane 2: Rabbit control IgG instead of anti-CD2 antibody in Jurkat whole cell lysate; Lane 3: anti-CD2 antibody (2ug) + Jurkat whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-CD2 antigen affinity purified polyclonal antibody (A00570-3) at a dilution of 0.5 ug/mL and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BM2007). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1196-200). A specific band was detected for CD2 at approximately 48 kDa. The expected band size for CD2 is at 39 kDa.

Flow Cytometry analysis of JK cells using anti-CD2 antibody (A00570-3). Overlay histogram showing JK cells stained with A00570-3 (Blue line). The cells were fixed with 4%



paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-CD2 Antibody (A00570-3, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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Anti-CD2 Antibody

For Research Use Only. Not for use in diagnostic procedures.