

Anti-CD7 Antibody Picoband™

Catalog Number: A01974-2

About CD7

CD7 (Cluster of Differentiation 7) is a protein that in humans is encoded by the CD7 gene. This gene encodes a transmembrane protein which is a member of the immunoglobulin superfamily. This protein is found on thymocytes and mature T cells. It plays an essential role in T-cell interactions and also in T-cell/B-cell interaction during early lymphoid development.

Overview

Product Name	Anti-CD7 Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-CD7 Antibody Picoband™ catalog # A01974-2. Tested in ELISA, Flow Cytometry, IHC, ICC, WB applications. This antibody reacts with Human.
Application	ELISA, Flow Cytometry, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Storage Instructions	Store 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 freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P09564

Technical Details

Immunogen	E. coli-derived human CD7 recombinant protein (Position: A26-D172).
Predicted Reactive Species	Human
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.

Suggested Dilutions

Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.

If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.

Some PubMed article(s) citing the expression level of this target are as follows:

Boster Bio's internal QC testing used:

Western blot, 0.1-0.5ug/ml

Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml

Immunohistochemistry (Frozen Section), 0.5-1ug/ml

Immunocytochemistry, 0.5-1ug/ml

Flow Cytometry, 1-3ug/1x10⁶ cells

Direct ELISA, 0.1-0.5ug/ml

Anti-CD7 Antibody Picoband™ (A01974-2) Images

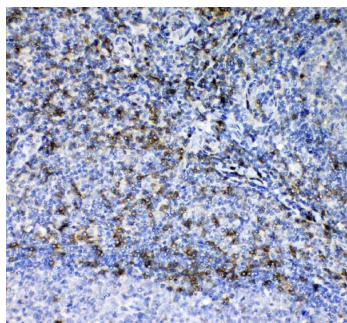


Figure 1. IHC analysis of CD7 using anti-CD7 antibody (A01974-2).
CD7 was detected in paraffin-embedded section of human tonsil tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-CD7 Antibody (A01974-2) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

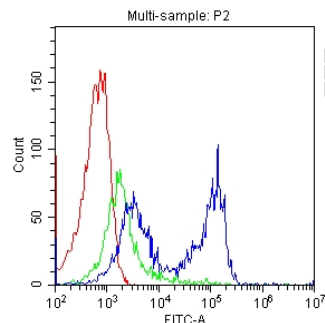


Figure 2. Flow Cytometry analysis of PBMC cells using anti-CD7 antibody (A01974-2).
Overlay histogram showing PBMC cells stained with A01974-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CD7 Antibody (A01974-2, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



Figure 3. Western blot analysis of CD7 using anti-CD7 antibody (A01974-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. Lane 1: recombinant human CD7 protein 1ng.
After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-CD7 antigen affinity purified polyclonal antibody (Catalog # A01974-2) at 0.5 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 at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for CD7 at approximately 30-40KD. The expected band size for CD7 is at 18KD.

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