

Anti-CD43/SPN Antibody Picoband™ (monoclonal, 4I3)

Catalog Number: M01296-1

About SPN

CD43, also known as leukosialin or sialophorin, is a transmembrane cell surface protein that in humans is encoded by the SPN gene. It is mapped to 16p11.2. It is a major sialoglycoprotein on the surface of human T lymphocytes, monocytes, granulocytes, and some B lymphocytes, which is important for immune function and may be part of a physiologic ligand-receptor complex involved in T-cell activation. Expression of CD43 is deficient and/or defective in the X-chromosome-linked immunodeficiency disorder Wiscott-Aldrich syndrome, suggesting that CD43 have a role in T-cell activation. T-cell activation requires the removal of CD43 from the immunologic synapse to allow efficient engagement of the TCR with molecules on the APC.

Overview

Product Name	Anti-CD43/SPN Antibody Picoband™ (monoclonal, 4I3)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-CD43/SPN Antibody Picoband™ (monoclonal, 4I3) catalog # M01296-1. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IHC, WB
Clonality	Monoclonal 4I3
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	Mouse
Uniprot ID	P16150

Technical Details

Immunogen	E.coli-derived human CD43 recombinant protein (Position: A272-P400). Human CD43 shares 72% and 73% amino acid (aa) sequence identity with mouse and rat CD43, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b
Form	Lyophilized
Concentration	0

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, Human

Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat, By Heat

Flow Cytometry, 1-3ug/1x10⁶ cells, Human

Anti-CD43/SPN Antibody Picoband™ (monoclonal, 4I3) (M01296-1) Images

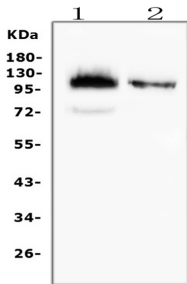


Figure 1. Western blot analysis of CD43 using anti-CD43 antibody (M01296-1).

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: human K562 whole cell lysates

Lane 2: human HL-60 whole cell lysates

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 mouse anti-CD43 antigen affinity purified monoclonal antibody (Catalog # M01296-1) 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-mouse 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 # EK1001) with Tanon 5200 system. A specific band was detected for CD43 at approximately 115KD. The expected band size for CD43 is at 40KD.

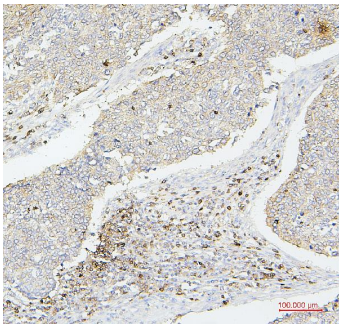


Figure 2. IHC analysis of CD43 using anti-CD43 antibody (M01296-1).

CD43 was detected in paraffin-embedded section of human lung cancer tissues. 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 mouse anti-CD43 Antibody (M01296-1) overnight at 4°C. Biotinylated goat anti-mouse 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 # SA1021) with DAB as the chromogen.

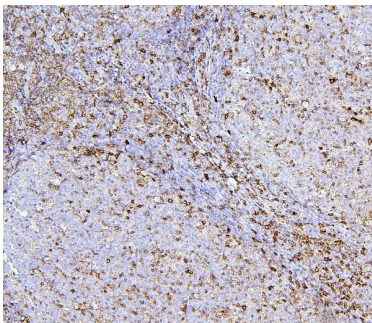
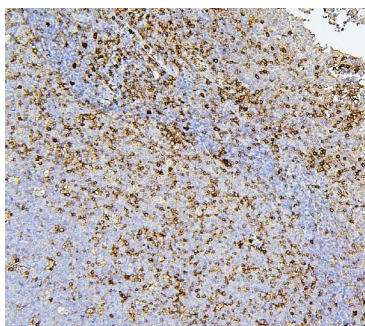


Figure 3. IHC analysis of CD43 using anti-CD43 antibody (M01296-1).

CD43 was detected in paraffin-embedded section of human tonsil tissues. 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 mouse anti-CD43 Antibody (M01296-1) overnight at 4°C. Biotinylated goat anti-mouse 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 # SA1021) with DAB as the chromogen.

Figure 4. IHC analysis of CD43 using anti-CD43 antibody (M01296-1).

CD43 was detected in paraffin-embedded section of human tonsil tissues. 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 mouse anti-CD43 Antibody (M01296-1) overnight at 4°C. Biotinylated goat anti-mouse 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 # SA1021) with DAB as the chromogen.

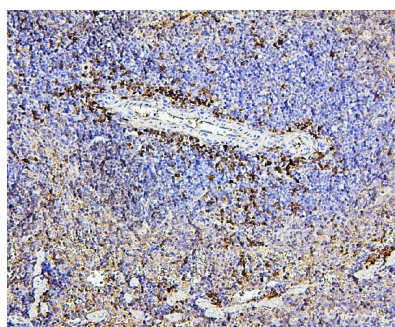


Figure 5. IHC analysis of CD43 using anti-CD43 antibody (M01296-1).

CD43 was detected in paraffin-embedded section of mouse spleen tissues. 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 mouse anti-CD43 Antibody (M01296-1) overnight at 4°C. Biotinylated goat anti-mouse 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 # SA1021) with DAB as the chromogen.

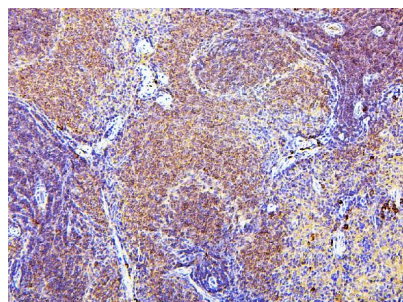


Figure 6. IHC analysis of CD43 using anti-CD43 antibody (M01296-1).

CD43 was detected in paraffin-embedded section of rat spleen tissues. 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 mouse anti-CD43 Antibody (M01296-1) overnight at 4°C. Biotinylated goat anti-mouse 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 # SA1021) with DAB as the chromogen.

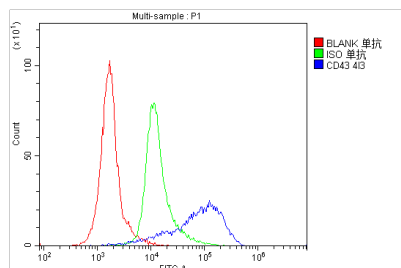


Figure 7. Flow Cytometry analysis of human PBMC cells using anti-CD43 antibody (M01296-1).

Overlay histogram showing human PBMC cells stained with M01296-1 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-CD43 Antibody (M01296-1, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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