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Anti-CD24 Antibody Picoband™

Catalog Number: A00373-2

About CD24

Signal transducer CD24, also known as cluster of differentiation 24 or heat stable antigen CD24 (HSA), is a protein that in humans is encoded by the CD24 gene. This gene encodes a sialoglycoprotein that is expressed on mature granulocytes and B cells and modulates growth and differentiation signals to these cells. The precursor protein is cleaved to a short 32 amino acid mature peptide which is anchored via a glycosyl phosphatidylinositol (GPI) link to the cell surface. This gene was missing from previous genome assemblies, but is properly located on chromosome 6. Non-transcribed pseudogenes have been designated on chromosomes 1, 15, 20, and Y. Alternative splicing results in multiple transcript variants.

Overview

Product Name	Anti-CD24 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-CD24 Antibody Picoband™ catalog # A00373-2. Tested in Flow Cytometry, IF, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IF, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_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	P25063

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human CD24.
Predicted Reactive Species	Chicken
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 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.

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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 Immunocytochemistry/Immunofluorescence, 2ug/ml Flow Cytometry, 1-3ug/1x10^6 cells

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Anti-CD24 Antibody Picoband™ (A00373-2) Images

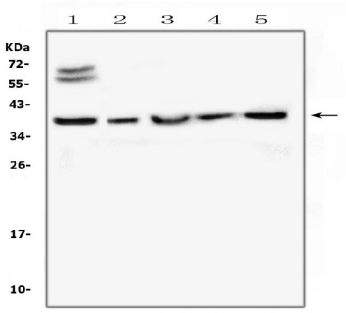

Figure 1. Western blot analysis of CD24 using anti-CD24 antibody (A00373-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human placenta tissue lysates,
Lane 3: human K562 whole cell lysates,
Lane 4: human A549 whole cell lysates,
Lane 5: human Jurkat 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 rabbit anti-CD24 antigen affinity purified polyclonal antibody (Catalog # A00373-2) 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 CD24 at approximately 39KD. The expected band size for CD24 is at 8KD.

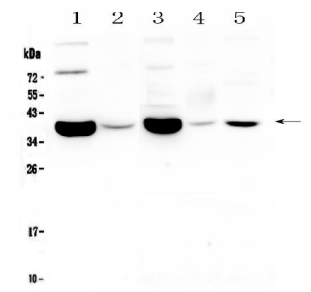

Figure 2. Western blot analysis of CD24 using anti-CD24 antibody (A00373-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: rat smooth muscle tissue lysates,
Lane 2: rat stomach tissue lysates,
Lane 3: mouse smooth muscle tissue lysates,
Lane 4: mouse stomach tissue lysates,
Lane 5: mouse RAW246.7 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 rabbit anti-CD24 antigen affinity purified polyclonal antibody (Catalog # A00373-2) 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 CD24 at approximately 39KD. The expected band size for CD24 is at 8KD.

Figure 3. Flow Cytometry analysis of Jurkat cells using anti-CD24 antibody (A00373-2).
Overlay histogram showing Jurkat cells stained with

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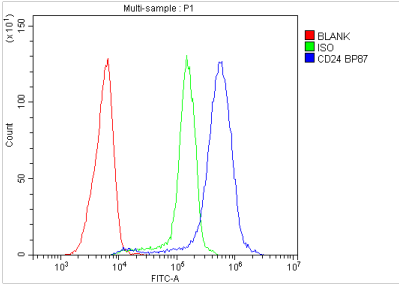

A00373-2 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabit anti-CD24 Antibody (A00373-2,1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

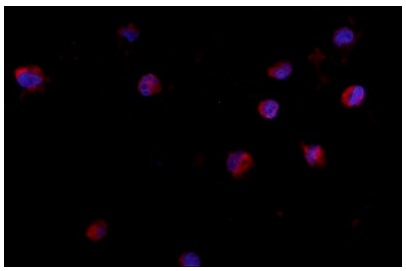

Figure 4. IF analysis of CD24 using anti-CD24 antibody (A00373-2).
CD24 was detected in immunocytochemical section of K562 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-CD24 Antibody (A00373-2) overnight at 4°C. DyLight®550 Conjugated Goat Anti-Rabbit IgG (BA1135) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

3 Publications Citing This Product

1. PubMed ID: 10.3892/or.2015.4521, CD24 promotes the proliferation and inhibits the apoptosis of cervical cancer cells in vitro

2. PubMed ID: -, ACS Appl.Bio Mater.2020,XXXX,XXX,XXX-XXX Publication Date:December 15, 2020 https://doi.org/10.1021/acsabm.0c00927

3. PubMed ID: 18477410, Suspension culture combined with chemotherapeutic agents for sorting of breast cancer stem cells

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