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antibody and ELISA experts

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Anti-CD44 antigen CD44 Antibody

Catalog Number: PA1021-2

About CD44

The CD44 gene, which is a transmembrane protein, is expressed as a family of molecular isoforms generated from alternative RNA splicing and posttranslational modifications. The gene, which contains 19 exons spanning some 50 kb of genomic DNA, is a widely expressed integral membrane protein that acts as a receptor for hyaluronan (HA) and is important to cell-extracellular matrix interaction. CD44 binding with HA can play an important role in cellular aggregation and tumor cell growth. CD44 is necessary for limb development and functions in a novel growth factor presentation mechanism. A specific CD44 splice variant is crucial for the proliferation of these mesenchymal cells. CD44 glycoproteins are involved in leukocyte extravasation but also in the regulation of growth factor activation, stability, and signaling. Moreover, it plays a pivotal role in arteriogenesis.

Overview

Product Name	Anti-CD44 antigen CD44 Antibody
Reactive Species	Human, Rat
Description	Boster Bio Anti-CD44 antigen CD44 Antibody catalog # PA1021-2. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Rat.
Application	Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
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	P16070

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human CD44, different from the related mouse and rat sequences by one amino acid.
Predicted Reactive Species	Hamster
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).
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	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, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Rat, By Heat Flow Cytometry, 1-3 ug/1x10^6 cells, Human

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Anti-CD44 antigen CD44 Antibody (PA1021-2) Images

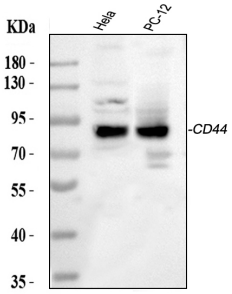

Figure 1. Western blot analysis of CD44 using anti-CD44 antibody (PA1021-2).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: rat PC-12 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-CD44 antigen affinity purified polyclonal antibody (Catalog # PA1021-2) 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 1:5000 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 CD44 at approximately 82 kDa. The expected band size for CD44 is at 82 kDa.

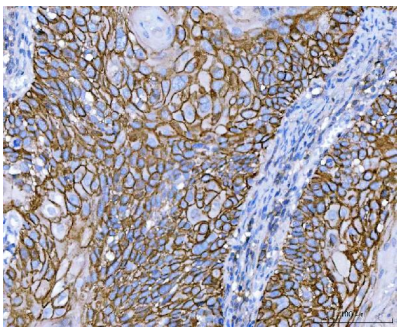

Figure 2. IHC analysis of CD44 using anti-CD44 antibody (PA1021-2).
CD44 was detected in a paraffin-embedded section of human laryngeal squamous cell carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD44 Antibody (PA1021-2) 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.

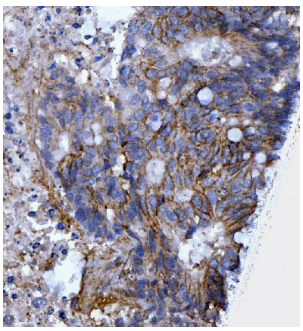

Figure 3. IHC analysis of CD44 using anti-CD44 antibody (PA1021-2).
CD44 was detected in a paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD44 Antibody (PA1021-2) 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.

Figure 4. IHC analysis of CD44 using anti-CD44 antibody (PA1021-2).

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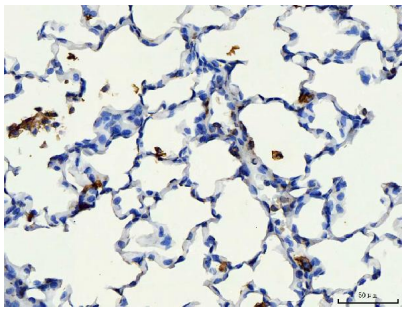

CD44 was detected in a paraffin-embedded section of rat lung tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CD44 Antibody (PA1021-2) 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.

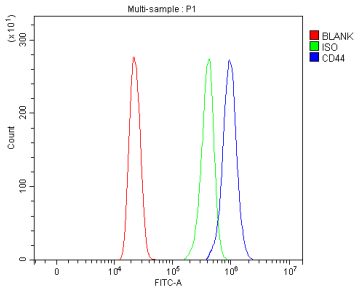

Figure 5. Flow Cytometry analysis of HL-60 cells using anti-CD44 antibody (PA1021-2).
Overlay histogram showing HL-60 cells stained with PA1021-2 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CD44 Antibody (PA1021-2, 1 ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

35 Publications Citing This Product

1. PubMed ID: 10.3390/ijms22010183, Rhus coriaria L. (Sumac) Demonstrates Oncostatic Activity in the Therapeutic and Preventive Model of Breast Carcinoma

2. PubMed ID: 10.3892/ol.2019.11087, Clinical prognostic significance of cancer stem cell markers in patients with papillary thyroid carcinoma

3. PubMed ID: 10.3892/ol.2016.4270, CD44 promotes the migration of bone marrow-derived mesenchymal stem cells toward glioma

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