BOSTER BIOLOGICAL TECHNOLOGY
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Anti-CD44 Antibody Picoband®

Catalog Number: PB9333

About CD44

CD44 is also known as LHR or MC56. The protein encoded by this gene is a cell-surface glycoprotein involved in cell-cell interactions, cell adhesion and migration. It is a receptor for hyaluronic acid (HA) and can also interact with other ligands, such as osteopontin, collagens, and matrix metalloproteinases (MMPs). This protein participates in a wide variety of cellular functions including lymphocyte activation, recirculation and homing, hematopoiesis, and tumor metastasis. Transcripts for this gene undergo complex alternative splicing that results in many functionally distinct isoforms, however, the full length nature of some of these variants has not been determined. Alternative splicing is the basis for the structural and functional diversity of this protein, and may be related to tumor metastasis.

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Overview

Product Name	Anti-CD44 Antibody Picoband®
Reactive Species	Human, Rat
Description	Boster Bio Anti-CD44 Antibody Picoband® catalog # PB9333. Tested in IF, IHC, WB applications. This antibody reacts with Human, Rat. 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	IF, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na2HPO4, and 0.05 mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
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

BOSTER
antibody and ELISA experts

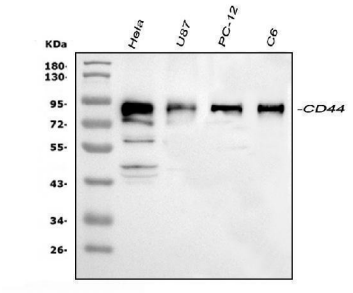
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Technical Details

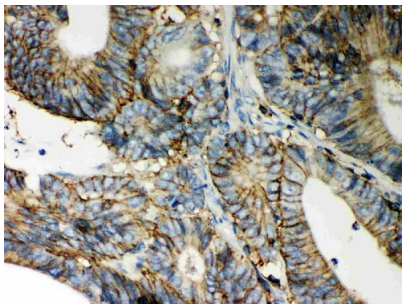
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human CD44, different from the related mouse and rat sequences by two amino acids.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
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, 0.1-0.5ug/ml, Human, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human Immunofluorescence, 2ug/ml, Human, Rat

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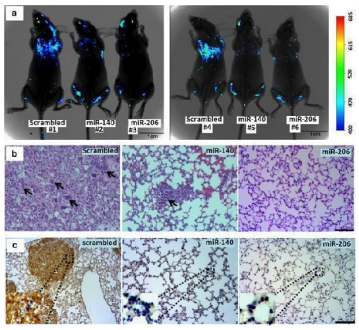
Anti-CD44 Antibody Picoband® (PB9333) Images



Western blot analysis of CD44 using anti-CD44 antibody (PB9333). 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: human U87 whole cell lysates, Lane 3: rat PC-12 whole cell lysates, Lane 4: rat C6 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 # PB9333) 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.



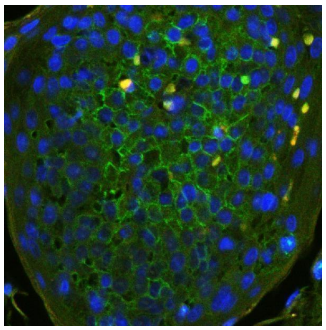
IHC analysis of CD44 using anti-CD44 antibody (PB9333). CD44 was detected in a paraffin-embedded section of Human Intestinal Cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-CD44 Antibody (PB9333) 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.



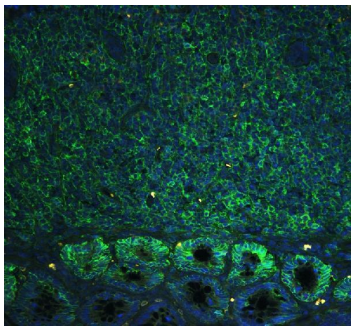
MiRNAs suppressed cell metastasis in vivo . (a) An experimental metastasis model was injected with control miR-206, miR-140, or scrambled control oligos-treated A549/34 R cells. (b) Visualization of the HE-stained lung section. Arrow, the migratory A549 cells. (c) Immunohistochemistry was conducted to detect CD44 expression. Brown color indicates the migratory A549 cells. Bar=100 u m Index in PubMed under a CC BY license. PMID: 28005074

IF analysis of CD44 using anti-CD44 antibody (PB9333) CD44 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 rabbit anti-CD44 Antibody (PB9333) overnight at 4°C. DyLight®488

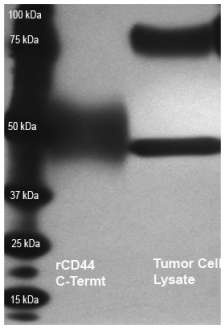
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Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IF analysis of CD44 using anti-CD44 antibody (PB9333) CD44 was detected in paraffin-embedded section of rat lymphaden 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 rabbit anti-CD44 Antibody (PB9333) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) 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.



Western blot analysis of CD44 using anti-CD44 antibody (PB9333). 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. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% milk in PBS/0.05% Tween-20 (5% milk/PBS/Tw) for 1.5 hour at RT. The membrane was incubated with rabbit anti-CD44 antibody (PB9333) at 1 ug/mL in 5% milk/PBS/0.05% Tween 20 overnight at 4°C , then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit antibody conjugated with HRP at 1:5,000 in 5% milk/PBS/Tw at 4°C for 12 hours. The signal is developed using an SuperSignal West Pico Chemiluminescent Substrate (Thermo Scientific). A specific band was detected for EGFR at approximately 20 kDa. The expected band size for EGFR is at 81 kDa.

38 Publications Citing This Product

1. PubMed ID: PMID:30210698, Identification and differentiation therapy strategy of pterygium in vitro

2. PubMed ID: 10.1016/j.biomaterials.2021.121260, An improved osseointegration of metal implants by pitavastatin loaded multilayer films with osteogenic and angiogenic properties

3. PubMed ID: 10.1021/acs.molpharmaceut.7b00377, Ternary Nanoparticles with a Sheddable Shell Efficiently Deliver MicroRNA-34a against CD44-Positive Melanoma

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Anti-CD44 Antibody

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