BOSTER BIOLOGICAL TECHNOLOGY
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888-466-3604 | support@bosterbio.com | www.bosterbio.com

Anti-CD44 Picoband® Antibody (monoclonal, 7H7)

Catalog Number: M00052-3

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 Picoband® Antibody (monoclonal, 7H7)
Reactive Species	Human, Rat
Description	Boster Bio Anti-CD44 Picoband® Antibody (monoclonal, 7H7) catalog # M00052-3. Tested in Flow Cytometry, IF, ICC, 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	Flow Cytometry, IF, ICC, WB
Clonality	Monoclonal 7H7
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg 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	Mouse
Uniprot ID	P16070

Technical Details

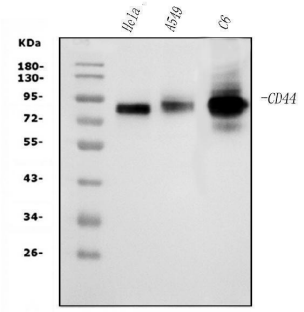
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human CD44, different from the related mouse and rat sequences by two amino acids.

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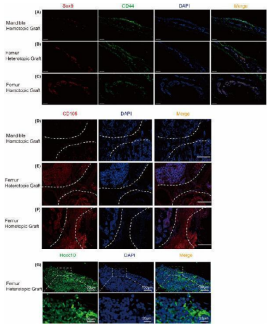
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5ug/ml, Human, Rat Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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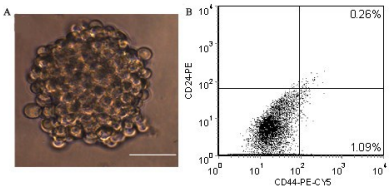
Anti-CD44 Picoband® Antibody (monoclonal, 7H7) (M00052-3) Images



Western blot analysis of CD44 using anti-CD44 antibody (M00052-3). 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 A549 whole cell lysates, Lane 3: rat C6 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-CD44 antigen affinity purified monoclonal antibody (Catalog # M00052-3) 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 CD44 at approximately 82KD. The expected band size for CD44 is at 82KD.



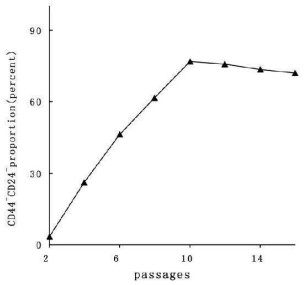
Hoxc10 exists in mesodermal derived callus. The immunofluorescence of Sox9 and CD44 in the mandible homotopic grafting (A), femoral heterotopic grafting (B) and femoral homotopic grafting(C). Sox9 represents cartilage (red), CD44 is a BMSCs marker (green), and DAPI marks the nucleus. (Scale bars, 500 um) (D–F) represent the immunofluorescence of CD105 in mandible homotopic grafting, femoral heterotopic grafting, and femoral homotopic grafting, respectively. The white dotted line shows the edge of the femoral graft and the mandibular graft, and the middle of the dotted line is the callus. (Scale bars, 200 um) (G) Localization of Hoxc10 at callus in femoral heterotopic grafting. (Scale bars, 100 um; Scale bars, 20 um) The data are presented as the mean ± SD (n = 6). * p < 0.05.Index in PubMed under a CC BY license. PMID: 39434203

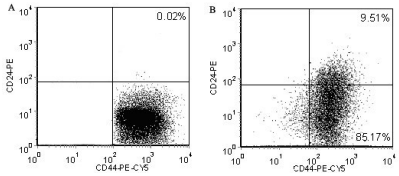


(A) floating tumorspheres after 6 days of suspension culture. Scale bar = 100 um. (B) CD44 + CD24 - expression in TM40D cell line. Index in PubMed under a CC BY license. PMID: 18477410

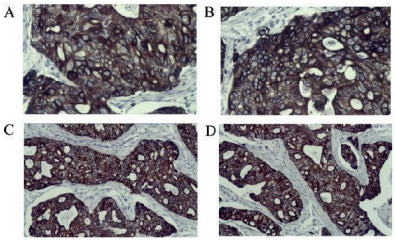
CD44 + CD24 - expression under serum-free culture condition during serial passages. Index in PubMed under a CC BY license. PMID: 18477410

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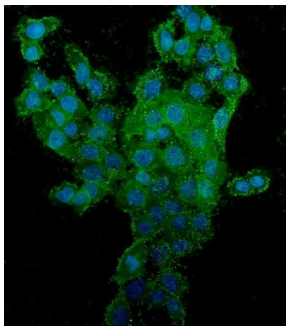




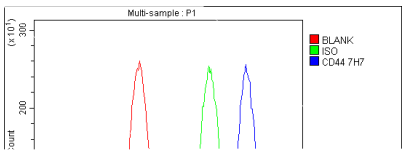
CD44 + CD24 - expression in cells treated with 0.35PPC of PE. (A) one week after chemotherapy. (B) two weeks after chemotherapy. Index in PubMed under a CC BY license. PMID: 18477410



The expression of CD44 and CD24 of histological sections by immunochemistry analysis. (A, B) CD44 and CD24 staining from the xenograft tumors driven by a single sorted cell, respectively. (C, D) CD44 and CD24 staining from the xenograft tumors driven by unsorted TM40D cells, respectively. (both 20 objective). Index in PubMed under a CC BY license. PMID: 18477410



IF analysis of CD44 using anti-CD44 antibody (M00052-3). CD44 was detected in immunocytochemical section of A431 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 5ug/mL mouse anti-CD44 Antibody (M00052-3) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) 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.



Flow Cytometry analysis of U87 cells using anti-CD44 antibody (M00052-3). Overlay histogram showing U87 cells stained with M00052-3 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with mouse anti- CD44 Antibody (M00052-3, 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 without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

15 Publications Citing This Product

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1. PubMed ID: 10.1186/1471-2407-8-135, Suspension culture combined with chemotherapeutic agents for sorting of breast cancer stem cells

2. PubMed ID: 10.1186/s13065-017-0313-1, Two phenolic antioxidants in Suoyang enhance viability of •OH-damaged mesenchymal stem cells: comparison and mechanistic chemistry

3. PubMed ID: 10.1620/tjem.233.175, Colorectal Cancer Progression Is Associated with Accumulation of Th17 Lymphocytes in Tumor Tissues and Increased Serum Levels of Interleukin-6

Visit bosterbio.com/anti-cd44-picoband-trade-antibody-m00052-3-boster.html to see all 15 publications.

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