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Anti-PROM1 Antibody Picoband®

Catalog Number: PB9156

About PROM1

Prominin-1, also known as CD133, is a glycoprotein that in humans is encoded by the PROM1 gene. It is mapped to 4p15.32. Prominin-1 is a member of pentaspan transmembrane glycoproteins (5-transmembrane, 5-TM), which specifically localize to cellular protrusions. This gene encodes a pentaspan transmembrane glycoprotein. The protein localizes to membrane protrusions and is often expressed on adult stem cells, where it is thought to function in maintaining stem cell properties by suppressing differentiation. It has been proposed to act as an organizer of cell membrane topology. Prominin-1 was expressed not only on metastatic colon cancer cells, but also on differentiated colonic epithelium in both adult mice and humans.

Overview

Product Name	Anti-PROM1 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-PROM1 Antibody Picoband® catalog # PB9156. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human. 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, 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	O43490

Technical Details

Immunogen	E.coli-derived human PROM1 recombinant protein (Position: P531-H865). Human PROM1 shares 61% amino acid (aa) sequence identity with mouse PROM1.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

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	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 Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human

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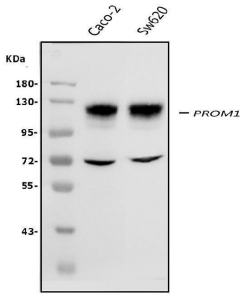
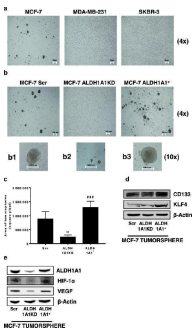
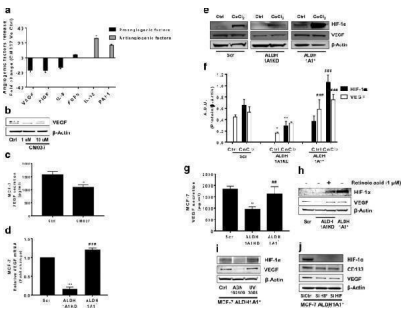
Anti-PROM1 Antibody Picoband® (PB9156) Images



Western blot analysis of PROM1 using anti-PROM1 antibody (PB9156). 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 CACO-2 whole cell lysates, Lane 2: human SW620 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-PROM1 antigen affinity purified polyclonal antibody (Catalog # PB9156) 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 PROM1 at approximately 120KD. The expected band size for PROM1 is at 120KD.



MCF-7 ALDH1A1 affects in vitro stemness. a Representative images of tumorspheres (4x magnification) showing morphology of spheroids grown on ultra-low attachment plate. Scale bar, 100 um. b Representative images of tumorspheres (4x magnification) of MCF-7 Scr, MCF-7 ALDH1A1KD and MCF-7 ALDH1A1 + , showing morphology of spheroids grown on ultra-low attachment plate. Scale bar, 100 um. b1, b2, b3. Representative images of tumorspheres (10x magnification) of MCF-1 Scr, MCF-7 ALDH1A1KD and MCF-7 ALDH1A1 + , showing morphology of spheroids grown on ultra-low attachment plate. Scale bar, 100 um. c Quantification of MCF-7 tumorspheres. Tumorspheres area were calculated using ImageJ Software. Ten pictures for each well were quantified. Tumorspheres> 10.000 pixel square were considered. ** p



MCF-7 ALDH1A1 regulates angiogenic factor output via retinoic acid signalling. a Angiogenic factor release evaluated by ELISA plate array in supernatants of MCF-7 treated with CM037 (1 uM) for 48 h. The experiment was performed 2 times in duplicate. b MCF-7 cells were exposed to CM037 at different concentrations (1 and 10 uM) for 18 h and western blot was carried out. beta-Actin was used to normalize loading. c Cells were treated with CM037 (1 uM, 18 h) and VEGF levels were measured by ELISA assay in MCF-7 conditioned media. After 18 h supernatants were harvested and cells fixed, stained and counted. The number of counted cells was not significantly different. Data are reported as pg/ml. ** p

ALDH1A1 influences tumor angiogenesis and VEGF production in vivo. a Evaluation of VEGF, HIF-1alpha and

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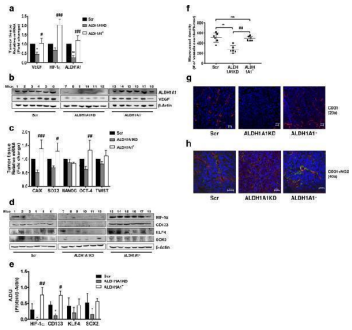
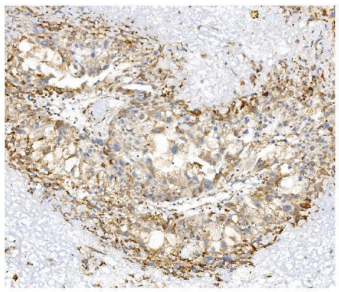
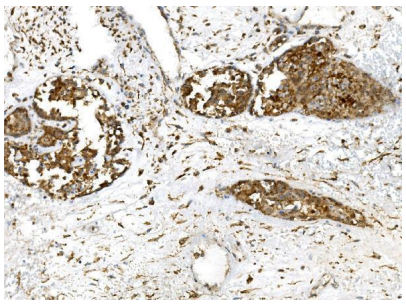


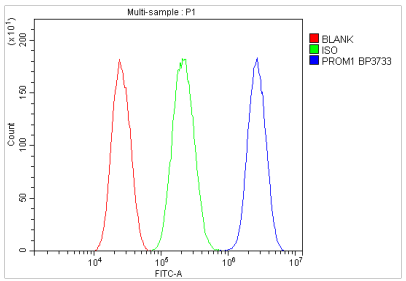
ALDH1A1 RNA in tumor samples. Frozen tumors were homogenized and RNA was extracted to perform RT-PCR analysis of VEGF, HIF-1alpha and ALDH1A1 mRNA. Data are reported as ΔCt (Ct gene of interest-Ct Housekeeping gene). Each bar is the mean of 6 different tumors. The experiment was repeated two times. * p



IHC analysis of PROM1 using anti-PROM1 antibody (PB9156). PROM1 was detected in paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-PROM1 Antibody (PB9156) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IHC analysis of PROM1 using anti-PROM1 antibody (PB9156). PROM1 was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-PROM1 Antibody (PB9156) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



Flow Cytometry analysis of CACO-2 cells using anti-PROM1 antibody (PB9156).Overlay histogram showing CACO-2 cells stained with PB9156 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-PROM1 Antibody (PB9156,1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit 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.

8 Publications Citing This Product

1. PubMed ID: , Multifunctional liposomes loaded with paclitaxel and artemether for treatment of invasive brain glioma

2. PubMed ID: 27486877, A three-dimensional collagen scaffold cell culture system for screening anti-glioma therapeutics

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3. PubMed ID: 25666351, Chen Q, Zhang Z, Liu J, He Q, Zhou Y, Shao G, Sun X, Cao X, Gong A, Jiang P. Mol Cells. 2015 Mar;38(3):221-8. Doi: 10.14348/Molcells.2015.2170. Epub 2015 Feb 4. A Fibrin Matrix Promotes The Differentiation Of Emscs Isolated From Nasal Respiratory ...

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Anti-PROM1 Antibody

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