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Anti-PROM1/CD133 Antibody Picoband™ (monoclonal, 8B6)

Catalog # ABO14991

Specification

Anti-PROM1/CD133 Antibody Picoband™ (monoclonal, 8B6) - Product Information

Application	**WB, FC**
Primary Accession	O43490
Host	**Mouse**
Isotype	**Mouse IgG2a**
Reactivity	**Human, Mouse**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-PROM1/CD133 Antibody Picoband™ (monoclonal, 8B6) . Tested in Flow Cytometry, WB applications. This antibody reacts with Human, Mouse.

Reconstitution
Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-PROM1/CD133 Antibody Picoband™ (monoclonal, 8B6) - Additional Information

Gene ID 8842

Other Names
Prominin-1, Antigen AC133, Prominin-like protein 1, CD133, PROM1, PROML1

Calculated MW
120 kDa KDa

Application Details
Western blot, 0.25-0.5 µg/ml, Human, Mouse
 Flow Cytometry, 1-3 µg/1x10^6 cells, Human

Contents
Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.

Immunogen
E.coli-derived human PROM1/CD133 recombinant protein (Position: P531-H865). HumanPROM1/CD133 shares 61% amino acid (aa) sequence identity with mouse PROM1/CD133.

Purification
Immunogen affinity purified.

Storage	**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.**

Anti-PROM1/CD133 Antibody Picoband™ (monoclonal, 8B6) - Protein Information

Name PROM1

Synonyms PROML1

Function
May play a role in cell differentiation, proliferation and apoptosis (PubMed:24556617). Binds cholesterol in cholesterol- containing plasma membrane microdomains and may play a role in the organization of the apical plasma membrane in epithelial cells. During early retinal development acts as a key regulator of disk morphogenesis. Involved in regulation of MAPK and Akt signaling pathways. In neuroblastoma cells suppresses cell differentiation such as neurite outgrowth in a RET-dependent manner (PubMed:20818439).

Cellular Location
Apical cell membrane; Multi-pass membrane protein. Cell projection, microvillus membrane; Multi-pass membrane protein. Cell projection, cilium, photoreceptor outer segment Endoplasmic reticulum. Endoplasmic reticulum-Golgi intermediate compartment. Note=Found in extracellular membrane particles in various body fluids such as cerebrospinal fluid, saliva, seminal fluid and urine

Tissue Location
Isoform 1 is selectively expressed on CD34 hematopoietic stem and progenitor cells in adult and fetal bone marrow, fetal liver, cord blood and adult peripheral blood. Isoform 1 is not detected on other blood cells. Isoform 1 is also expressed in a number of non-lymphoid tissues including retina, pancreas, placenta, kidney, liver, lung, brain and heart. Found in saliva within small membrane particles. Isoform 2 is predominantly expressed in fetal liver, skeletal muscle, kidney, and heart as well as adult pancreas, kidney, liver, lung, and placenta. Isoform 2 is highly expressed in fetal liver, low in bone marrow, and barely detectable in peripheral blood Isoform 2 is expressed on hematopoietic stem cells and in epidermal basal cells (at protein level). Expressed in adult retina by rod and cone photoreceptor cells (at protein level)

Anti-PROM1/CD133 Antibody Picoband™ (monoclonal, 8B6) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-PROM1/CD133 Antibody Picoband™ (monoclonal, 8B6) - Images

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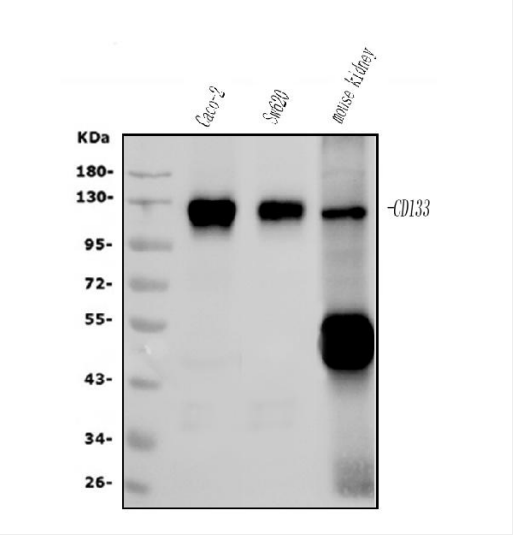

Figure 1. Western blot analysis of PROM1/CD133 using anti-PROM1/CD133 antibody (M01767-3). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions.
Lane 1: human CACO-2 whole cell lysates,
Lane 2: human SW620 whole cell lysates,
Lane 3: mouse kidney tissue 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-PROM1/CD133 antigen affinity purified monoclonal antibody (Catalog # M01767-3) at 0.5 µg/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 PROM1/CD133 at approximately 120KD. The expected band size for PROM1/CD133 is at 120KD.

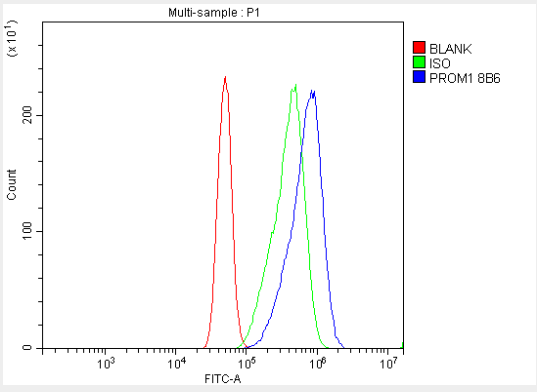

Figure 2. Flow Cytometry analysis of CACO-2 cells using anti-PROM1/CD133 antibody (M01767-3). Overlay histogram showing CACO-2 cells stained with M01767-3 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-PROM1/CD133 Antibody (M01767-3, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Anti-PROM1/CD133 Antibody Picoband™ (monoclonal, 8B6) - Background

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.