10320 Camino Santa Fe, Suite G
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Tel: 858.875.1900 Fax: 858.875.1999

Anti-PROM1 Antibody
Catalog # ABO11357

Specification

Anti-PROM1 Antibody - Product Information

Application	**WB, IHC-P**
Primary Accession	O43490
Host	**Rabbit**
Reactivity	**Human, Rat**
Clonality	**Polyclonal**
Format	**Lyophilized**

Description
Rabbit IgG polyclonal antibody for Prominin-1(PROM1) detection. Tested with WB, IHC-P in Human;Rat.

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

Anti-PROM1 Antibody - Additional Information

Gene ID 8842

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

Calculated MW
97202 MW KDa

Application Details
Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat
Western blot, 0.1-0.5 µg/ml, Human, Rat

Subcellular Localization
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. Found in extracellular membrane particles in various body fluids such as cerebrospinal fluid, saliva, seminal fluid and urine.

Tissue Specificity
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). .

Protein Name
Prominin-1

Contents
Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.

Immunogen
A synthetic peptide corresponding to a sequence at the C-terminus of human PROM1(836-850aa MKNMENGNNGYHKDH), different from the related rat sequence by two amino acids, and from the related mouse sequence by three amino acids.

Purification
Immunogen affinity purified.

Cross Reactivity
No cross reactivity with other proteins

Storage

At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time.Avoid repeated freezing and thawing.

Sequence Similarities
Belongs to the prominin family.

Anti-PROM1 Antibody - 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
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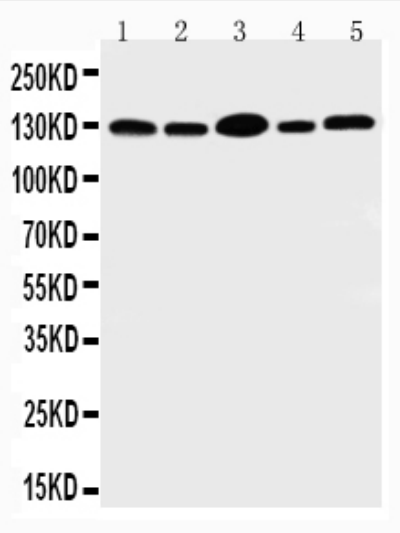
liver, low in bone marrow, and barely detectable in peripheral blood Isoform 2 is expressed on hematopoietic stem cells and in epidermal basal cells (at protein level). Expressed in adult retina by rod and cone photoreceptor cells (at protein level)

Anti-PROM1 Antibody - 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 Antibody - Images



Anti-PROM1 antibody, ABO11357, Western blottingLane 1: PANC Cell LysateLane 2: HELA Cell LysateLane 3: SW620 Cell LysateLane 4: COLO320 Cell LysateLane 5: A549 Cell Lysate

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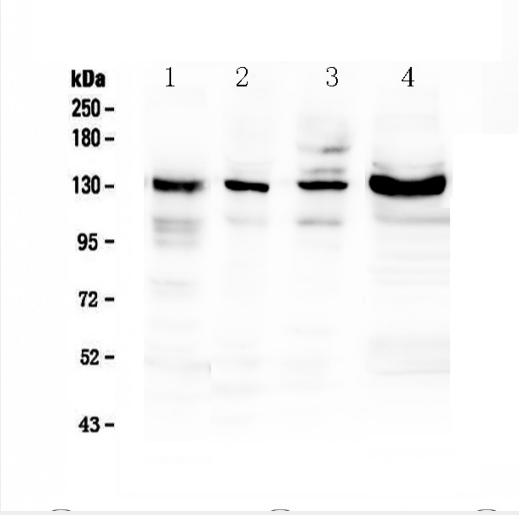
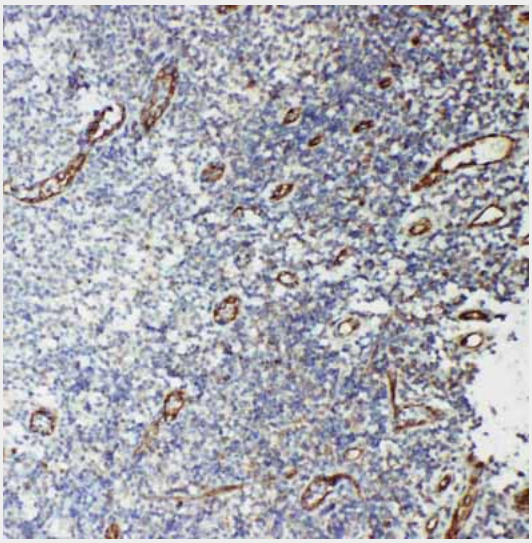


Figure 1. Western blot analysis of PROM1 using anti- PROM1 antibody (ABO11357). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat liver tissue lysates, Lane 2: mouse liver tissue lysates,Lane 3: mouse lung tissue lysates,Lane 4: rat brain 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 rabbit anti- PROM1 antigen affinity purified polyclonal antibody (Catalog # ABO11357) at 0.5 Î¼g/mL overnight at 4Â°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 with Tanon 5200 system. A specific band was detected for PROM1 at approximately 130KD. The expected band size for PROM1 is at 97KD.



Anti-PROM1 antibody, ABO11357, IHC(P)IHC(P): Human Tonsil Tissue

Anti-PROM1 Antibody - Background

PROM1(Prominin 1), also called CD133, is a glycoprotein. Maw et al.(2000) noted that D4S1601 and D4S3048, which are located on human chromosome 4p15.3-p15.2, map within intronic sequences of the PROML1 gene. Torrente et al.(2004) reported that a subpopulation of circulating cells expressing AC133, a well-characterized marker of hematopoietic stem cells, also expresses early myogenic markers. Singh et al.(2003) prospectively isolated a CD133-positive cell subpopulation

from human brain tumors that exhibited stem cell properties in vitro. However, the true measures of cancer stem cells are their capacity for self renewal and exact recapitulation of the original tumor.