

**PROM1 Antibody**  
Catalog # ASC11795**Specification****PROM1 Antibody - Product Information**

Application	WB, ICC, IF
Primary Accession	<a href="#">O43490</a>
Other Accession	<a href="#">NP_006008</a> , <a href="#">5174387</a>
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	Predicted: 95 kDa

Application Notes	<b>Observed: 97 kDa KDa</b> <b>PROM1 antibody can be used for detection of PROM1 by Western blot at 1 - 2 µg/ml. Antibody can also be used for Immunocytochemistry at 2.5 µg/mL. For Immunofluorescence start at 20 µg/mL.</b>
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**PROM1 Antibody - Additional Information**Gene ID **8842****Target/Specificity**

PROM1; PROM1 antibody is human, mouse and rat reactive. Multiple isoforms of PROM1 are known to exist.

**Reconstitution & Storage**

Antibody can be stored at 4°C up to one year. Antibodies should not be exposed to prolonged high temperatures.

**Precautions**

PROM1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**PROM1 Antibody - Protein Information**

Name PROM1

Synonyms PROML1

**Function**

May play a role in cell differentiation, proliferation and apoptosis (PubMed:<a href="http://www.uniprot.org/citations/24556617" target="\_blank">24556617</a>). 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:<a href="http://www.uniprot.org/citations/20818439" target="\_blank">20818439</a>).

#### 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

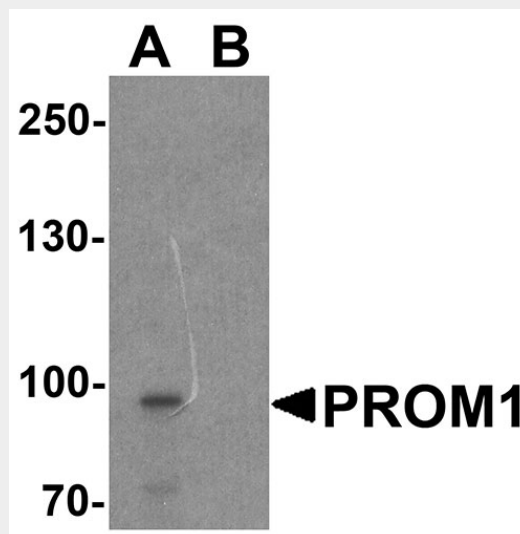
Isoform 1 is selectively expressed on CD34 hematopoietic stem and progenitor cells in adult and fetal bone marrow, fetal liver, cord blood and adult peripheral blood. Isoform 1 is not detected on other blood cells. Isoform 1 is also expressed in a number of non-lymphoid tissues including retina, pancreas, 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)

#### PROM1 Antibody - Protocols

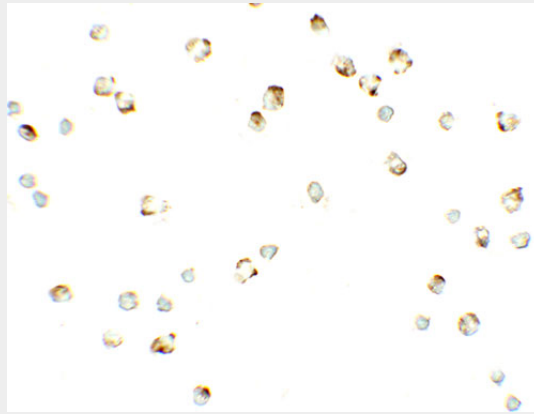
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

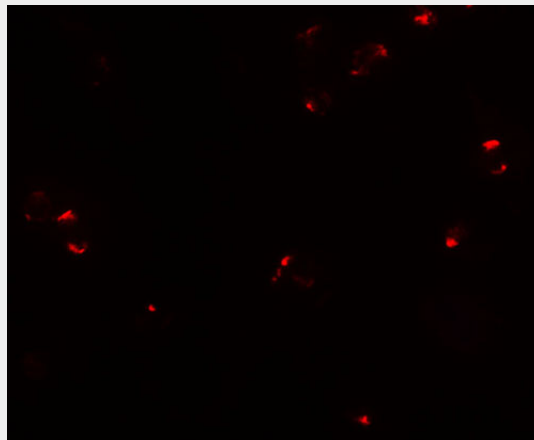
#### PROM1 Antibody - Images



absence and (B) the presence of blocking peptide.



Immunocytochemistry of PROM1 in Jurkat cells with PROM1 antibody at 2.5 µg/mL.



Immunofluorescence of PROM1 in Jurkat cells with PROM1 antibody at 20 µg/mL.

### **PROM1 Antibody - Background**

PROM1 is a pentaspan transmembrane glycoprotein that 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 (1). Mutations in this gene have been shown to result in retinitis pigmentosa (2). Expression of this gene is also associated with several types of cancer (3).

### **PROM1 Antibody - References**

- Yin AH, Miraglia S, Zanjani ED, et al. AC133, a novel marker for human hematopoietic stem and progenitor cells. *Blood* 1997; 90:5002-12.
- Zhang Q, Zulfiqar F, Xiao X, et al. Severe retinitis pigmentosa mapped to 4p15 and associated with a novel mutation in the PROM1 gene. *Hum. Genet.* 2007; 122:293-9.
- Tabu K, Bizen N, Taga T, et al. Gene regulation of Prominin-1 (CD133) in normal and cancerous tissues. *Adv. Exp. Med. Biol.* 2013; 777:73-85.