

**AC133 (CD133) Antibody**  
**Purified Mouse Monoclonal Antibody (Mab)**  
**Catalog # AM1130a**

**Specification**

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**AC133 (CD133) Antibody - Product Information**

|                   |                        |
|-------------------|------------------------|
| Application       | <b>WB, IHC-P,E</b>     |
| Primary Accession | <a href="#">O43490</a> |
| Reactivity        | <b>Human</b>           |
| Host              | <b>Mouse</b>           |
| Clonality         | <b>Monoclonal</b>      |
| Isotype           | <b>Mouse IgG1</b>      |

**AC133 (CD133) Antibody - Additional Information**

**Gene ID** 8842

**Other Names**

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

**Target/Specificity**

This monoclonal antibody is generated from mice immunized with a KLH conjugated synthetic peptide selected from the N-terminal region of AC133.

**Dilution**

WB~~1:500~1000

IHC-P~~1:10~50

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

AC133 (CD133) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**AC133 (CD133) 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

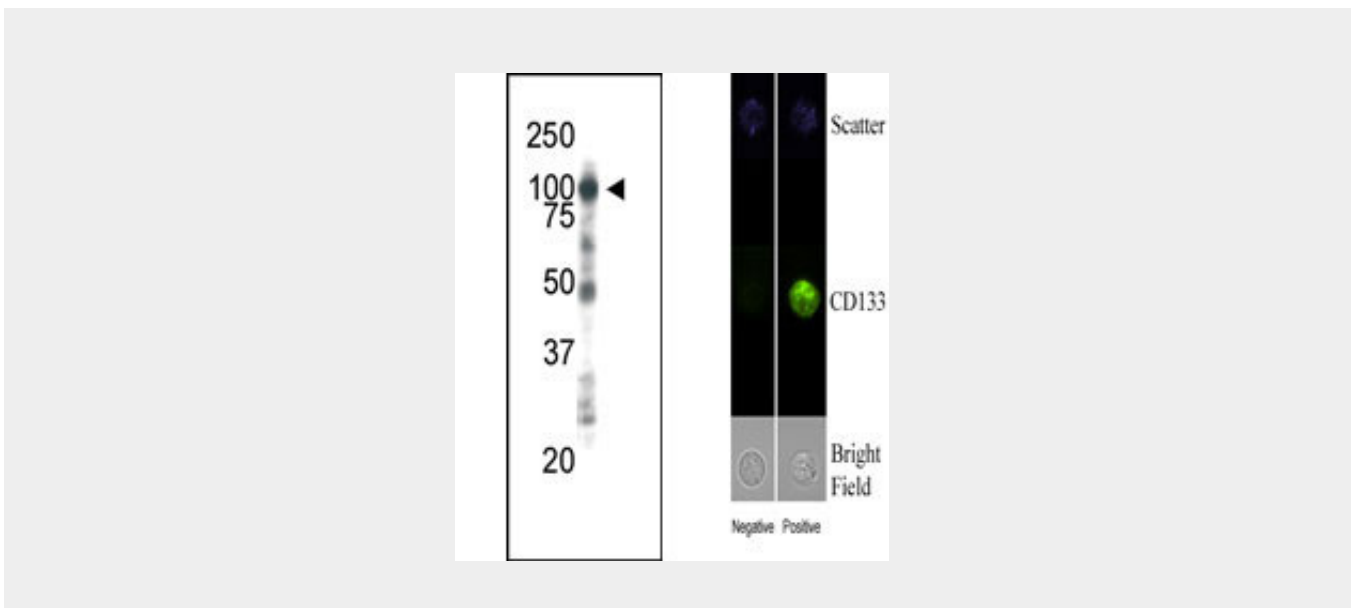
Isoform 1 is selectively expressed on CD34 hematopoietic stem and progenitor cells in adult and fetal bone marrow, fetal liver, cord blood and adult peripheral blood. Isoform 1 is not detected on other blood cells. Isoform 1 is also expressed in a number of non-lymphoid tissues including retina, pancreas,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

### AC133 (CD133) Antibody - Protocols

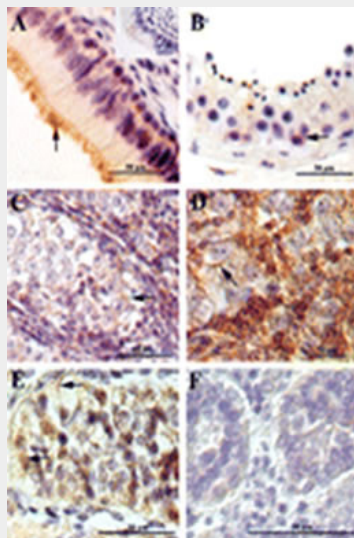
Provided below are standard protocols that you may find useful for product applications.

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

### AC133 (CD133) Antibody - Images



Western blot analysis of cell lysates from Y79 cell lines using AC133 antibody am1130a. Immunofluorescence analysis of Bone Marrow Mononuclear Cells stained with monoclonal CD133. Image courtesy of Rick Cohen from the Coriell Institute for Medical Research (NJ, USA).



Localization of PROM1 protein in testicular tissues (A) Positive staining of PROM1 in the stereocilia (arrow) of epididymal duct in an adult. The inset presents a corresponding negative control. (B) Sporadic expression of PROM1 protein was visible in testis with regular spermatogenesis. The arrow points to a spermatogonia with a slightly stained cytoplasm. (C) PROM1 was present in membranous compartment of intratubular tumour cells as marked by the arrow. (D) Solid arrow marks the positive, membranous staining of seminoma cells for PROM1. Note the cytoplasmatic staining in several cells and the positive signal in stromal compartment including leukocytes. (E) Representative staining of PROM1 in testicular tissues from the 22nd week of gestation. The arrows mark the localization of PROM1 in gonocytes to a membrane and cytoplasmatic region. (F) No distinct PROM1 signal could be observed in third trimester of gestation (here, 30th week of gestation is presented)

### AC133 (CD133) Antibody - Background

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. Mutations in this gene have been shown to result in retinitis pigmentosa and Stargardt disease. Expression of this gene is also associated with several types of cancer. This gene is expressed from at least five alternative promoters that are expressed in a tissue-dependent manner. Multiple transcript variants encoding different isoforms have been found for this gene.

### AC133 (CD133) Antibody - References

Prognostic impact of the expression of putative cancer stem cell markers CD133, CD166, CD44s, EpCAM, and ALDH1 in colorectal cancer. Lugli A, et al. *Br J Cancer*, 2010 Jul 27. PMID 20606680. Members of the low-density lipoprotein receptor-related proteins provide a differential molecular signature between parental and CD133+ DAOY medulloblastoma cells. Annabi B, et al. *Mol Carcinog*, 2010 Jul. PMID 20564348. Activation of Akt and MAPK pathways enhances the tumorigenicity of CD133+ primary colon cancer cells. Wang YK, et al. *Carcinogenesis*, 2010 Aug. PMID 20530554. Demethylation of the CD133 gene is frequently detected in early gastric carcinoma. Hibi K, et al. *Anticancer Res*, 2010 Apr. PMID 20530428. The stem cell marker CD133 associates with enhanced colony formation and cell motility in colorectal cancer. Elsaba TM, et al. *PLoS One*, 2010 May 19. PMID 20502714.