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CD133 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1590a

Product Information

Application	IHC, FC, E
Primary Accession	O43490
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	3F10
Isotype	IgG1
Calculated MW	97202
Description	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.
Immunogen	Synthesized peptide of human CD133.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	8842
Other Names	Prominin-1, Antigen AC133, Prominin-like protein 1, CD133, PROM1, PROML1
Dilution	IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD133 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

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)

References

1. Stem Cells. 2009 Dec;27(12):2875-83. 2. Pancreas. 2009 Nov;38(8):e207-14.

Images

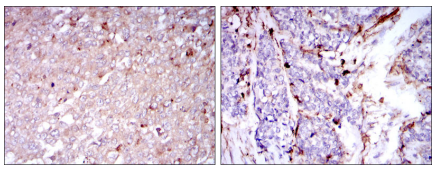

Figure 1: Immunohistochemical analysis of paraffin-embedded human breast cancer tissues (left) and human esophageal cancer tissues (right) using CD133 mouse mAb with DAB staining.

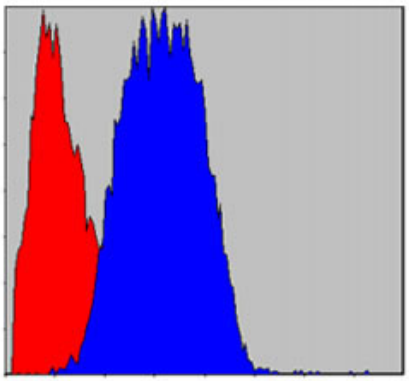

Figure 2: Flow cytometric analysis of Hela cells using CD133 mouse mAb (blue) and negative control (red).