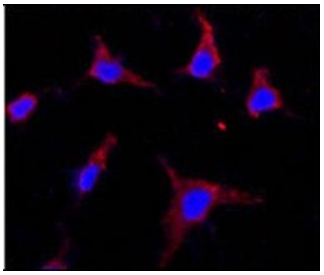
CD133 Antibody (F54322)

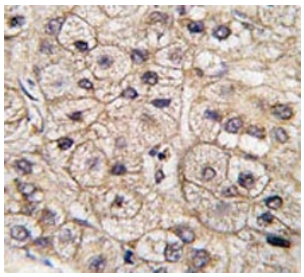
Catalog No.	Formulation	Size
F54322-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F54322-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

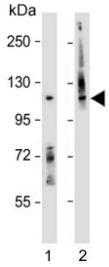
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	SAS precipitation
UniProt	O43490
Applications	Western Blot : 1:500-1:2000 Immunofluorescence : 1:25 Immunohistochemistry (FFPE) : 1:25 Flow Cytometry : 1:25 (1x10e6 cells)
Limitations	This CD133 antibody is available for research use only.



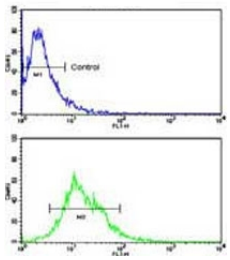
Immunofluorescent staining of fixed and permeabilized human HeLa cells with CD133 antibody (red) and DAPI nuclear stain (blue).



IHC testing of FFPE human hepatocellular carcinoma tissue with CD133 antibody. HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to staining.



Western blot testing of human 1) A431 and 2) Caco-2 cell lysate with CD133 antibody. Predicted molecular weight: 97-130 kDa depending on glycosylation level.



Flow cytometry testing human CEM cells with CD133 antibody; Blue=isotype control, Green= CD133 antibody.

Description

The CD133 gene codes for a pentaspan transmembrane glycoprotein. The CD133 antigen appears to belong to a new molecular family of 5-TM proteins, as the characterization of the CD133 antigen and prominin in the mouse were the first descriptions of a 5-TM glycoprotein structure. This 'family' includes members from several different species (which may be homologs) including human, mouse, rat, fly, and worm. The 5-TM structure includes an extracellular N-terminus, two short intracellular loops, two large extracellular loops and an intracellular C-terminus CD133 was initially shown to be expressed on primitive hematopoietic stem and progenitor cells and retinoblastoma. CD133 has since been shown to be expressed on hemangioblasts, and neural stem cells as well as on developing epithelium. Expression patterns for CD133 generally mimic those of the murine prominin molecule, although CD133 antigen has not yet been demonstrated on adult epithelial tissue. The CD133 positive fraction of human bone marrow, cord blood and peripheral blood have been shown to efficiently engraft in xenotransplantation models, and have been shown to contain the majority of the granulocyte/macrophage precursors, NOD/SCID repopulating cells and CD34 + dendritic cell precursors. Phenotypically, CD133 positive cells in blood and marrow are CD34 bright, with CD34 dim CD71 bright cells being negative for CD133 expression. Many leukemias express CD133 as well as CD34 , but some investigators have noted leukemic blasts which are CD133+ and CD34 negative. No natural ligand has yet been demonstrated for the CD133 molecule, and its function in hematopoietic tissue is unknown.

Application Notes

The stated application concentrations are suggested starting points. Titration of the CD133 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion amino acids from the C-terminal region of the human protein was used as the immunogen for the CD133 antibody.

Storage

Aliquot the CD133 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.