

Anti-CD34 Picoband Antibody

Catalog # ABO11773

Product Information

Application	WB, IHC-P, IHC-F, FC, ICC
Primary Accession	P28906
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Hematopoietic progenitor cell antigen CD34(CD34) detection. Tested with WB, IHC-P, IHC-F, ICC, FCM in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	947
Other Names	Hematopoietic progenitor cell antigen CD34, CD34, CD34
Calculated MW	40716
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 μ g/ml, By Heat Immunohistochemistry(Frozen Section), 0.5-1 μ g/ml Immunocytochemistry, 0.5-1 μ g/ml Western blot, 0.1-0.5 μ g/ml Flow Cytometry, 1-3 μ g/1x10 ⁶ cells
Subcellular Localization	Membrane; Single-pass type I membrane protein.
Tissue Specificity	Selectively expressed on hematopoietic progenitor cells and the small vessel endothelium of a variety of tissues.
Source	Eukaryota
Protein Name	Hematopoietic progenitor cell antigen CD34
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
Immunogen	E.coli-derived human CD34 recombinant protein (Position: T151-L385). Human CD34 shares 79% amino acid (aa) sequence identity with mouse CD34.
Purification	Immunogen affinity purified.

Cross Reactivity	No cross reactivity with other proteins
Storage	At -20 °C for one year. After reconstitution, 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 CD34 family.

Protein Information

Name	CD34
Function	Possible adhesion molecule with a role in early hematopoiesis by mediating the attachment of stem cells to the bone marrow extracellular matrix or directly to stromal cells. Could act as a scaffold for the attachment of lineage specific glycans, allowing stem cells to bind to lectins expressed by stromal cells or other marrow components. Presents carbohydrate ligands to selectins.
Cellular Location	Membrane; Single-pass type I membrane protein.
Tissue Location	Selectively expressed on hematopoietic progenitor cells and the small vessel endothelium of a variety of tissues

Background

CD34 is a monomeric cell surface antigen with a molecular mass of approximately 110 KD. CD34 is expressed in humans in hematopoietic stem cells, vascular endothelium, and blasts from 30% of patients with acute myeloid and lymphocytic leukemia. The human CD34 gene spans 26 kb and has 8 exons, a structure quite similar to that of the murine gene. By Southern blot analysis of DNA from a panel of human x mouse somatic cell hybrids using a CD34 cDNA probe demonstrate that the gene for CD34 is located on human chromosome 1 in the 1q12---qter region. CD34 plays an important role in the formation of progenitor cells during both embryonic and adult hematopoiesis.

Images

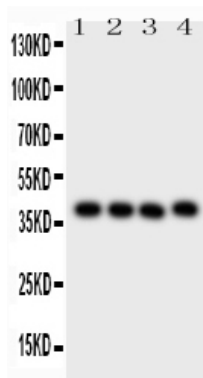


Figure 1. Western blot analysis of CD34 using anti-CD34 antibody (ABO11773). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: MCF-7 Whole Cell Lysate Lane 2: MM231 Whole Cell Lysate Lane 3: SMMC Whole Cell Lysate Lane 4: HepG2 Whole Cell Lysate 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-CD34 antigen affinity purified polyclonal antibody (Catalog # ABO11773) at 0.5 µg/mL overnight at 4 °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 CD34 at

approximately 41KD. The expected band size for CD34 is at 41KD.

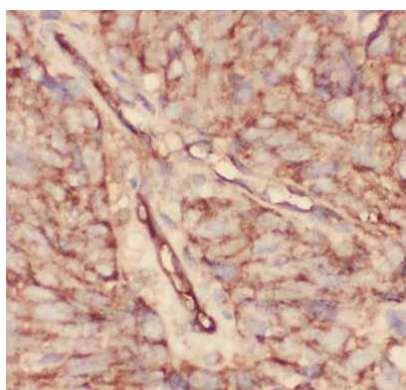


Figure 2. IHC analysis of CD34 using anti-CD34 antibody (ABO11773).CD34 was detected in paraffin-embedded section of Human Lung Cancer Tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 μ g/ml rabbit anti-CD34 Antibody (ABO11773) overnight at 4 $^{\circ}$ C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 $^{\circ}$ C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

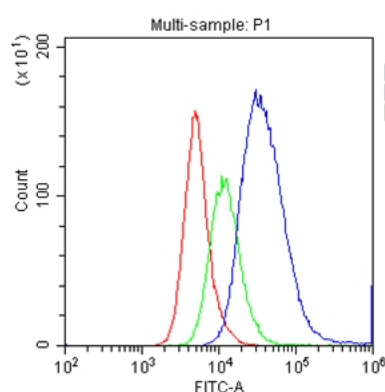


Figure 3. Flow Cytometry analysis of Raji cells using anti-CD34 antibody (ABO11773).Overlay histogram showing Raji cells stained with ABO11773 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-CD34 Antibody (ABO11773,1 μ g/1x10⁶ cells) for 30 min at 20 $^{\circ}$ C. DyLight2488 conjugated goat anti-rabbit IgG (BA1127, 5-10 μ g/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20 $^{\circ}$ C. Isotype control antibody (Green line) was rabbit IgG (1 μ g/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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