

Datasheet: MCA547B

Description:	MOUSE ANTI HUMAN CD34:Biotin
Specificity:	CD34 CLASS II
Format:	Biotin
Product Type:	Monoclonal Antibody
Clone:	QBEND/10
Isotype:	IgG1
Quantity:	100 TESTS

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	■			Neat

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species	Human
Species Cross Reactivity	Reacts with: Cynomolgus monkey, Rhesus Monkey Does not react with: Bovine, Sheep, Rat, Dog N.B. Antibody reactivity and working conditions may vary between species.
Product Form	Purified IgG conjugated to Biotin - liquid
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.1mg/ml
Immunogen	Human endothelial cell membrane vesicles.
External Database Links	UniProt: P28906 Related reagents Entrez Gene: 947 CD34 Related reagents

Fusion Partners	Spleen cells from immunized NZB mice were fused with cells of the mouse NSO myeloma cell line.
Specificity	Mouse anti Human CD34 antibody, clone QBEND/10 recognizes the human CD34 antigen, also known as Hematopoietic progenitor cell antigen CD34. Human CD34 is 385 amino acid polypeptide containing a 31 residue signal peptide, cleaved to yield the ~110kDa mature form of CD34, a sialomucin single pass transmembrane glycoprotein. CD34 is expressed by stem cells (Kaufman et al. 2001) and small vessel endothelium (Ramani et al. 1990) Human CD34 exists as two isoforms, the full length form described here and a truncated isoform lacking the carboxy-terminal of the intracellular domain and containing some alternative sequence in the remaining intracellular region. Antibody binding epitopes on human CD34 have been classified according to their resistance to enzymatic degradation and grouped together using this and competitive binding assays (Lanza et al. 1999). Clone QBEND/10 has been classified as binding to the class II epitope, resistant to neuraminidase treatment but sensitive to both glycoprotease and chymopapain digestion. Clone QBEND/10 binds to a different epitope to Mouse anti Human CD34, clone 581 (MCA1578) which binds to the class III epitope resistant to all three enzymatic treatments (Nishio et al. 1996 In Leukocyte Typing VI). Clone QBEND 10 is expected to bind to both isoforms of human CD34 as its binding epitope has been mapped to the extracellular domain between amino acids 43 and 49 by peptide microarray analysis (Jones et al. 1996, in Leukocyte Typing VI). Mouse anti Human CD34 antibody, clone QBEND/10 has been successfully exploited for the detection of CD34 in brain capillaries of Alzheimer's patients (Kalaria et al. 1992) and in acute lymphoblastic leukemia cells (Sutherland et al. 1992) by western blotting.
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	1. Fina, L. et al. (1990) Expression of the CD34 gene in vascular endothelial cells. Blood. 75 (12): 2417-26. 2. Sopper, S. et al. (1997) Lymphocyte subsets and expression of differentiation markers in blood and lymphoid organs of rhesus monkeys. Cytometry. 29 (4): 351-62. 3. Chan-Ling T (2011) Role of CD44+ Stem Cells in Mural Cell Formation in the Human Choroid: Evidence of Vascular Instability Due to Limited Pericyte Ensheathment. Invest Ophthalmol Vis Sci. 52: 399-410. 4. Pammer, J. et al. (1996) CD40 antigen is expressed by endothelial cells and tumor cells in Kaposi's sarcoma. Am J Pathol. 148 (5): 1387-96. 5. Lee, M.Y. et al. (2009) Angiogenesis in differentiated placental multipotent mesenchymal stromal cells is dependent on integrin alpha5beta1. PLoS One. 4: e6913. 6. Chan-Ling, T. et al. (2004) Astrocyte-endothelial cell relationships during human retinal vascular development. Invest Ophthalmol Vis Sci. 45: 2020-32. 7. Chen, S.P. et al. (2014) Reduced circulating endothelial progenitor cells in reversible cerebral vasoconstriction syndrome. J Headache Pain. 15: 82. 8. Sauer, G. et al. (2003) Progression of cervical carcinomas is associated with down-regulation of CD9 but strong local re-expression at sites of transendothelial invasion. Clin Cancer Res. 9: 6426-31. 9. Sauter, B. et al. (1998) Immunoelectron Microscopic Characterization of Human Dermal Lymphatic Microvascular Endothelial Cells: Differential Expression of CD31, CD34, and Type IV Collagen with Lymphatic Endothelial Cells vs Blood Capillary Endothelial Cells in Normal Human Skin, Lymphangioma, and Hemangioma <i>In Situ</i>. J Histochem Cytochem. 46: 165-76. 10. Shetty, S. et al. (2011) Common lymphatic endothelial and vascular endothelial receptor-1 mediates the transmigration of regulatory T cells across human hepatic sinusoidal endothelium. J Immunol. 186: 4147-55.

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Further Reading

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Storage

Store at +4°C or at -20°C if preferred.
 Storage in frost-free freezers is not recommended.
 This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life

12 months from date of despatch.

Health And Safety Information

Material Safety Datasheet documentation #10041 available at:
 10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

Regulatory

For research purposes only

Related Products

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)
[HUMAN SEROBLOCK \(BUF070B\)](#)

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