

Datasheet: MCA547F

Description:	MOUSE ANTI HUMAN CD34:FITC
Specificity:	CD34 CLASS II
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	QBEND/10
Isotype:	IgG1
Quantity:	100 TESTS/1ml

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 - 1/10
Immunohistology - Frozen			■	
Immunohistology - Paraffin			■	

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 Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid								
Max Ex/Em	<table><tr><th>Fluorophore</th><th>Excitation Max (nm)</th><th>Emission Max (nm)</th></tr><tr><td>FITC</td><td>490</td><td>525</td></tr></table>	Fluorophore	Excitation Max (nm)	Emission Max (nm)	FITC	490	525		
Fluorophore	Excitation Max (nm)	Emission Max (nm)							
FITC	490	525							
Buffer Solution	Phosphate buffered saline								
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃) 1% Bovine Serum Albumin								
Approx. Protein Concentrations	IgG concentration 0.1mg/ml								
Immunogen	Human endothelial cell membrane vesicles.								
External Database	UniProt:								

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 10⁶ cells in 100ul.

- References**
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Storage	Store at +4°C or at -20°C if preferred. This product should be stored undiluted. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
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Shelf Life	18 months from the date of despatch.
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**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 Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

Recommended Useful Reagents

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

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

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