Datasheet: MCA1578F

Description:	MOUSE ANTI HUMAN CD34:FITC
Specificity:	CD34 CLASS III
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	581
Isotype:	IgG1
Quantity:	0.1 mg

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

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

N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form

Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid.

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
FITC	490	525

Preparation

Purified IgG prepared by affinity chromatography on Protein A.

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

<0.1% Sodium Azide (NaN_3)

	0.2% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml.
External Database Links	**UniProt:** P28906 Related reagents **Entrez Gene:** 947 CD34 Related reagents
RRID	AB_1125261
Specificity	**Mouse anti Human CD34 antibody, clone 581** recognizes the human CD34 cell surface antigen also known as Hematopoietic progenitor cell antigen CD34. Clone 581 binds to an epitope of human CD34 resistant to neuraminadase, chymopapain and glycoprotease treatments. The binding epitopes are classified according to their resistance to enzymatic degradation and antibodies assigned according to this and cross inhibition studies. Clone 581 is classified as class III (Lanza *et al.* 1999). CD34 is a 385 amino acid pro-peptide with the 31 amino acid signal peptide cleaved to yield the mature form of CD34. CD34 is a single pass type I ~105-120 kDa highly glycosylated transmembrane glycoprotein, expressed by hematopoietic stem cells and small vessel endothelial cells. CD34 contains a number of sialylated residues and has a mucin-like structure (Simmons *et al.* 1992). A truncated form of the CD34 molecule has also been identified lacking the carboxy-terminal region of the intracellular sequence, also bearing a sequence switch in the remaining cytoplasmic region (Nakamura *et al.* 1993). Mouse anti Human CD34 antibody, clone 581 is expected to react with both isoforms of the CD34 molecule as it recognizes an epitope located in the extracellular region of human CD34. Mouse anti Human CD34 antibody, clone 581 has been used successfully for the immunohistochemical detection of stem-like cells present in hepatoblastoma lesions on cryostat sections (Fiegal *et al.* 2004).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.
References	1. Civin, C.I. *et al.* (1984) Antigenic analysis of hematopoiesis. III. A hematopoietic progenitor cell surface antigen defined by a monoclonal antibody raised against KG-1a cells. J Immunol. 133 (1): 157-65. 2. Fiegel, H.C. *et al.* (2004) Stem-like cells in human hepatoblastoma. J Histochem Cytochem. 52 (11): 1495-501. 3. Maumus, M. *et al.* (2011) Native human adipose stromal cells: localization, morphology and phenotype. Int J Obes (Lond). 35 (9): 1141-53. 4. Patel, J. *et al.* (2013) Prospective surface marker-based isolation and expansion of fetal endothelial colony-forming cells from human term placenta. Stem Cells Transl Med. 2 (11): 839-47.

5. Park, J.Y. *et al.* (2020) rhBMP-2 Pre-Treated Human Periodontal Ligament Stem Cell Sheets Regenerate a Mineralized Layer Mimicking Dental Cementum. Int J Mol Sci. 21 (11): 3767.
6. Kim, S.H. *et al.* (2019) Forkhead box O1 (FOXO1) controls the migratory response of Toll-like receptor (TLR3)-stimulated human mesenchymal stromal cells. J Biol Chem. 294 (21): 8424-37.

Further Reading	1. Yoshino, N. *et al*. (2000) Upgrading of flow cytometric analysis for absolute counts, cytokines and other antigenic molecules of Cynomolgus monkeys (*Macaca fascicularis*) by using anti-human cross-reactive antibodies. Exp. Anim. 49: 97-110.
Storage	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C. Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.
Guarantee	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 Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA928F)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)

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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M392261:211026'

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