

## Datasheet: MCA1578PET

<b>Description:</b>	MOUSE ANTI HUMAN CD34:RPE
<b>Specificity:</b>	CD34 CLASS III
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	581
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	25 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](http://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.

<b>Target Species</b>	Human		
<b>Species Cross Reactivity</b>	Reacts with: Cynomolgus monkey <b>N.B.</b> Antibody reactivity and working conditions may vary between species.		
<b>Product Form</b>	Purified IgG conjugated to R. Phycoerythrin (RPE) - liquid		
<b>Max Ex/Em</b>	<b>Fluorophore</b> RPE 488nm laser	<b>Excitation Max (nm)</b> 496	<b>Emission Max (nm)</b> 578
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A.		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative</b>	0.09% Sodium Azide		
<b>Stabilisers</b>	0.2% Bovine Serum Albumin		
<b>External Database Links</b>	<b>UniProt:</b> <a href="#">P28906</a> <a href="#">Related reagents</a>  <b>Entrez Gene:</b> <a href="#">947</a> CD34 <a href="#">Related reagents</a>		

**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 neuraminidase, 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 kD 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](#)). 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 ([Fiegel et al. 2004](#)).

**Flow Cytometry**

Use 10ul of the suggested working dilution to label 10<sup>6</sup> 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. 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.](#)
3. Maumus, M. *et al.* (2011) Native human adipose stromal cells: localization, morphology and phenotype. [Int J Obes \(Lond\). 35 \(9\): 1141-53.](#)
4. Fiegel, H.C. *et al.* (2004) Stem-like cells in human hepatoblastoma. [J Histochem Cytochem. 52 \(11\): 1495-501.](#)

**Storage**

Store at +4°C.

DO NOT FREEZE.

This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

**Shelf Life**

6 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:RPE \(MCA928PE\)](#)

## Recommended Useful Reagents

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

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

**North & South** Tel: +1 800 265 7376

**America** Fax: +1 919 878 3751

Email: [antibody\\_sales\\_us@bio-rad.com](mailto:antibody_sales_us@bio-rad.com)

**Worldwide**

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

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