

Catalog Number: 10148-MM02-F

General Information	
<b>Immunogen:</b>	Recombinant Human CD31 / PECAM1 protein (Catalog#10148-H08H)
<b>Reagents:</b>	FITC-conjugated mouse monoclonal antibody
<b>Specificity:</b>	Human CD31 / PECAM1
<b>Clone ID:</b>	8B4C10E12
<b>Ig Type:</b>	Mouse IgG1
<b>Applications:</b>	Flow Cytometry
<b>Concentration:</b>	5 µl/Test, 0.2 mg/ml
<b>Formulation:</b>	Aqueous solution containing 0.5% BSA and 0.1% sodium azide
<b>Storage:</b>	2 °C - 8 °C in the dark

## Preparation

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with purified, recombinant Human CD31 / PECAM1 (rhCD31; Catalog#10148-H08H; Met 1-Lys 601; NP\_000433.3) and conjugated with FITC under optimum conditions, the unreacted FITC was removed.

## Storage

This antibody is stable for 12 months from date of receipt when stored at 2°C - 8°C. Protected from prolonged exposure to light. **Do not freeze !** Sodium azide is toxic to cells and should be disposed of properly. Flush with large volumes of water during disposal

## Applications

### Flow Cytometry –

**Fig 1, Fig 2. Flow cytometric analysis of anti-CD31 reactivity on peripheral blood lymphocytes and blood monocytes.**

Profile of peripheral blood lymphocytes and blood monocytes analyzed by flow cytometry.

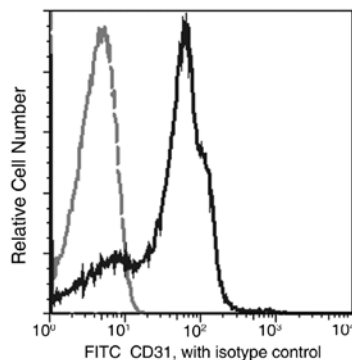


Fig 1. Analysis of anti-CD31 reactivity on on peripheral blood lymphocytes

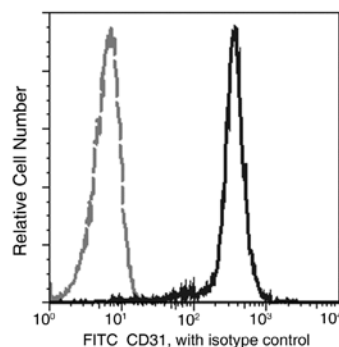


Fig 2. Analysis of anti-CD31 reactivity on on blood monocytes

Flow cytometry was performed on a BD FACSCalibur flow cytometry system. Please refer to [www.sinobiological.com/Flow-Cytometry-FACS-Protocols-a-750.html](http://www.sinobiological.com/Flow-Cytometry-FACS-Protocols-a-750.html) for technical protocols.



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## Specificity

Human CD31 / PECAM1

**No cross-reactivity** in ELISA with

Human CD54

Human CD62

Human CD106

Human cell lysate (293 cell line)

## Background

The CD31 adhesion molecule, also known as platelet-endothelial cell adhesion molecule-1 (PECAM-1), is a transmembrane glycoprotein expressed by endothelial cells, platelets, monocytes, neutrophils, and certain T cell subsets, and is the only known member of the CAM family on platelets. CD31 has six Ig-homology domains that share sequence similarity with cellular adhesion molecules within the extracellular region, and an immunoreceptor tyrosine-based inhibitory motif (ITIM) in the cytoplasmic region. Accordingly, CD31 acts as a signaling molecule when appropriately engaged and creates docking sites for the Src homology 2 domain-bearing protein tyrosine phosphatase (SHP)-1 and SHP-2. PECAM-1 mediates the homotypic or heterotypic cell adhesion by binding to itself or the leukocyte integrin  $\alpha\beta_3$ , and thus plays a role in neutrophil recruitment in inflammatory responses, transendothelial migration of leukocytes, as well as in cardiovascular development. In addition, it has been shown that CD31 expression is up-regulated by LPS stimulation, and might function as a feedback negative regulator of LPS inflammatory response in macrophages.

## Reference

1. Newman, P.J. et al., 1990, Science. 247:1219-22.
2. Sun, J. et al., 1996, J. Biol. Chem. 271: 18561-70.
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4. Rui, YX. et al., 2007, J. Immunol. 179: 7344-51.
5. Woodfin, A. et al., 2007, Arterioscler. Thromb. Vasc. Biol. 27: 2514-23.