

## Datasheet: MCA1370Z

<b>Description:</b>	HAMSTER ANTI MOUSE CD31:Preservative Free
<b>Specificity:</b>	CD31
<b>Other names:</b>	PECAM-1
<b>Format:</b>	Preservative Free
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	2H8
<b>Isotype:</b>	IgG
<b>Quantity:</b>	0.5 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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			0.1ug/ml
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting			▪	
Immunofluorescence	▪			
Functional Assays	▪			

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>	Mouse
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by Caprylic Acid Precipitation
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	None present. Sterile filtered.
<b>Approx. Protein Concentrations</b>	IgG concentration 0.5 mg/ml
<b>Immunogen</b>	D10.G4.1 cells ( <a href="#">Kaye et al. 1984</a> ).

**External Database  
Links**

**UniProt:**

[Q08481](#)   [Related reagents](#)

**Entrez Gene:**

[18613](#) Pecam1   [Related reagents](#)

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**Synonyms**

Pecam, Pecam-1

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**Fusion Partners**

Splenic lymphocytes from an immunized Armenian hamster were fused with cells from the SP2/0 murine myeloma.

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**Specificity**

**Hamster anti Mouse CD31 monoclonal antibody, clone 2H8** recognizes murine CD31, also known as Platelet endothelial cell adhesion molecule or PECAM-1. CD31 is a ~130kDa single pass type-1 membrane glycoprotein bearing six C2 Ig-like domains, expressed on all continuous endothelium including arteries, veins and non-sinusoidal capillaries. CD31 is also expressed on all haemopoietic lineages with the exception of the erythroid line ([Bogen \*et al.\* 1992](#)) .

Hamster anti mouse CD31, clone 2H8 effectively inhibits transmigration of activated polymorphonuclear cells and monocytes across the endothelium. In a mouse model for acute peritonitis clone 2H8 blocks acute inflammation ([Bogen \*et al.\* 1994](#)). CD31 has also been shown to be critically involved in the sensing of changes in shear stress associated with atherosclerotic lesions and in the associated atherogenesis ([Stevens \*et al.\* 2008](#)).

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**Flow Cytometry**

Use 5ul of the suggested working dilution to label 100ul of whole blood.

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**References**

1. Bogen, S.A. *et al.* (1992) Association of murine CD31 with transmigrating lymphocytes following antigenic stimulation. [Am J Pathol. 141 \(4\): 843-54.](#)
2. Xie, Y. & Muller, W.A. (1993) Molecular cloning and adhesive properties of murine platelet/endothelial cell adhesion molecule 1. [Proc Natl Acad Sci U S A. 90 \(12\): 5569-73.](#)
3. Bogen, S. *et al.* (1994) Monoclonal antibody to murine PECAM-1 (CD31) blocks acute inflammation *in vivo*. [J Exp Med. 179 \(3\): 1059-64.](#)
4. Bixel, M.G. *et al.* (2010) CD99 and CD99L2 act at the same site as, but independently of, PECAM-1 during leukocyte diapedesis. [Blood. 116: 1172-84.](#)
5. Ishikawa, J. *et al.* (2002) Use of anti-platelet-endothelial cell adhesion molecule-1 antibody in the control of disease progression in established collagen-induced arthritis in DBA/1J mice. [Jpn J Pharmacol. 88: 332-40.](#)
6. Thurston, G. *et al.* (2005) Angiopoietin 1 causes vessel enlargement, without angiogenic sprouting, during a critical developmental period [Development. 132: 3317-26.](#)
7. Lonsdorf, A.S. *et al.* (2012) Engagement of  $\alpha$ IIb $\beta$ 3 (GPIIb/IIIa) with  $\alpha$ v $\beta$ 3 Integrin Mediates Interaction of Melanoma Cells with Platelets: A CONNECTION TO HEMATOGENOUS METASTASIS. [J Biol Chem. 287: 2168-78.](#)
8. Rijcken, E. *et al.* (2007) PECAM-1 (CD 31) mediates transendothelial leukocyte migration in experimental colitis. [Am J Physiol Gastrointest Liver Physiol. 293: G446-52.](#)
9. Vielhauer, V. *et al.* (2005) Renal cell-expressed TNF receptor 2, not receptor 1, is essential for the development of glomerulonephritis. [J Clin Invest. 115: 1199-209.](#)
10. Brackett, C.M. *et al.* (2013) IL-17 promotes neutrophil entry into tumor-draining lymph nodes following induction of sterile inflammation. [J Immunol. 191 \(8\): 4348-57.](#)
11. Bixel, M.G. *et al.* (2010) CD99 and CD99L2 act at the same site as, but independently of, PECAM-1 during leukocyte diapedesis. [Blood. 116: 1172-84.](#)
12. Wu, Y. *et al.* (2010) Therapeutic antibody targeting of individual Notch receptors. [Nature. 464: 1052-7.](#)
13. Wilhelm, A. *et al.* (2015) CD248/endsialin critically regulates hepatic stellate cell proliferation

during chronic liver injury via a PDGF-regulated mechanism. [Gut. pii: gutjnl-2014-308325](#).  
14. Smith, S.W. *et al.* (2015) Genetic Deletion of the Stromal Cell Marker CD248 (Endosialin) Protects against the Development of Renal Fibrosis. [Nephron. 131 \(4\): 265-77](#).

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**Storage**

Store at -20°C only.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. 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 date of despatch.

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**Health And Safety Information**

Material Safety Datasheet documentation #10162 available at:  
10162: <https://www.bio-rad-antibodies.com/uploads/MSDS/10162.pdf>

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Goat Anti Hamster IgG (STAR104...) [DyLight®549](#), [DyLight®649](#), [DyLight®800](#),  
[FITC](#)

Goat Anti Hamster IgG (STAR79...) [Biotin](#), [FITC](#), [HRP](#)

### Recommended Negative Controls

[HAMSTER \(ARMENIAN\) IgG NEGATIVE CONTROL \(MCA2356\)](#)

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

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