

Datasheet: MCA1370Z

BATCH NUMBER 173787

Description:	HAMSTER ANTI MOUSE CD31:Preservative Free
Specificity:	CD31
Other names:	PECAM-1
Format:	Preservative Free
Product Type:	Monoclonal Antibody
Clone:	2H8
Isotype:	IgG
Quantity:	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.

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

Where this product 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 product for use in their own system using appropriate negative/positive controls.

Target Species	Mouse
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from ascites
Buffer Solution	Phosphate buffered saline
Preservative	None present.

Stabilisers	Sterile filtered.
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	D10.G4.1 cells (Kaye et al. 1984).
External Database Links	UniProt: Q08481 Related reagents Entrez Gene: 18613 Pecam1 Related reagents
Synonyms	Pecam, Pecam-1
RRID	AB_321653
Fusion Partners	Splenic lymphocytes from an immunized Armenian hamster were fused with cells from the SP2/0 murine myeloma.
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).
Flow Cytometry	Use 5µl of the suggested working dilution to label 100µl of whole blood
References	1. 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. 2. Bogen, S. et al. (1994) Monoclonal antibody to murine PECAM-1 (CD31) blocks acute inflammation <i>in vivo</i>. J Exp Med. 179 (3): 1059-64. 3. 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. 4. 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. 5. Thurston, G. et al (2005) Angiopoietin 1 causes vessel enlargement, without angiogenic sprouting, during a critical developmental period Development. 132: 3317-26. 6. 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.

7. Wu, Y. *et al.* (2010) Therapeutic antibody targeting of individual Notch receptors. [Nature. 464: 1052-7.](#)
8. 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.](#)
9. Lonsdorf, A.S. *et al.* (2012) Engagement of α IIb β 3 (GPIIb/IIIa) with α v β 3 integrin mediates interaction of melanoma cells with platelets: a connection to hematogenous metastasis. [J Biol Chem. 287 \(3\): 2168-78.](#)
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. 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.](#)
12. Wilhelm, A. *et al.* (2016) CD248/endosialin critically regulates hepatic stellate cell proliferation during chronic liver injury via a PDGF-regulated mechanism. [Gut. 65 \(7\): 1175-85.](#)
13. Kapanadze, T. *et al.* (2019) Multimodal and Multiscale Analysis Reveals Distinct Vascular, Metabolic and Inflammatory Components of the Tissue Response to Limb Ischemia. [Theranostics. 9 \(1\): 152-166.](#)
14. Naylor, A.J. *et al.* (2014) A differential role for CD248 (Endosialin) in PDGF-mediated skeletal muscle angiogenesis. [PLoS One. 9 \(9\): e107146.](#)

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.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10162 available at: https://www.bio-rad-antibodies.com/SDS/MCA1370Z
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Hamster IgG (STAR104...) [DyLight®550](#), [DyLight®650](#), [DyLight®800](#), [FITC](#)

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

Recommended Negative Controls

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

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
 'M454591:260727'

