

## Datasheet: MCA907F

**BATCH NUMBER 164078**

<b>Description:</b>	MOUSE ANTI HUMAN CD106:FITC
<b>Specificity:</b>	CD106
<b>Other names:</b>	VCAM-1
<b>Format:</b>	FITC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	1.G11B1
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	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](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.

Target Species	Human		
Species Cross Reactivity	Reacts with: Pig, Rhesus Monkey <b>N.B.</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 from tissue culture supernatant		

<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	0.09% Sodium Azide 0.1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 0.1mg/ml
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P19320</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">7412</a>    VCAM1    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	L1CAM
<b>RRID</b>	AB_931695
<b>Specificity</b>	<p><b>Mouse anti Human CD106 antibody, clone 1.G11B1</b> recognizes human VCAM-1, a ~110 kDa molecule whose ligand is VLA4. The antigen is expressed on activated endothelial cells and on some tissue macrophages, bone marrow fibroblasts and myoblasts.</p> <p>Mouse anti Human CD106 antibody, clone 1.G11B1 inhibits cellular adhesion mediated by VCAM-1 (<a href="#">Patel 1998</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Thornhill, M.H. <i>et al.</i> (1991) Tumor necrosis factor combines with IL-4 or IFN-gamma to selectively enhance endothelial cell adhesiveness for T cells. The contribution of vascular cell adhesion molecule-1-dependent and -independent binding mechanisms. <a href="#">J Immunol. 146 (2): 592-8.</a></li> <li>2. Rosenman, S.J. <i>et al.</i> (1995) Cytokine-induced expression of vascular cell adhesion molecule-1 (VCAM-1) by astrocytes and astrocytoma cell lines. <a href="#">J Immunol. 154 (4): 1888-99.</a></li> <li>3. Reparon-Schuijt, C.C. <i>et al.</i> (2000) Regulation of synovial B cell survival in rheumatoid arthritis by vascular cell adhesion molecule 1 (CD106) expressed on fibroblast-like synoviocytes. <a href="#">Arthritis Rheum. 43 (5): 1115-21.</a></li> <li>4. Ali, S. <i>et al.</i> (2000) Inter cellular cell adhesion molecule-1, vascular cell adhesion molecule-1, and regulated on activation normal T cell expressed and secreted are expressed by human breast carcinoma cells and support eosinophil adhesion and activation. <a href="#">Am J Pathol. 157: 313-21.</a></li> <li>5. Faure, J.P. <i>et al.</i> (2002) Polyethylene glycol reduces early and long-term cold ischemia-reperfusion and renal medulla injury. <a href="#">J Pharmacol Exp Ther. 302 (3): 861-70.</a></li> <li>6. Hauet, T. <i>et al.</i> (2002) Polyethylene glycol reduces the inflammatory injury due to cold ischemia/reperfusion in autotransplanted pig kidneys. <a href="#">Kidney Int. 62: 654-67.</a></li> <li>7. Cabeza, N. <i>et al.</i> (2004) Surface expression of collagen receptor Fc receptor-</li> </ol>

- gamma/glycoprotein VI is enhanced on platelets in type 2 diabetes and mediates release of CD40 ligand and activation of endothelial cells. [Diabetes 53: 2117-21.](#)
8. Dunoyer-Geindre, S. *et al.* (2004) Aspirin inhibits endothelial cell activation induced by antiphospholipid antibodies. [J Thromb Haemost. 2: 1176-81.](#)
  9. Pelletier M, Girard D. (2005) Interleukin-15 increases neutrophil adhesion onto human respiratory epithelial A549 cells and attracts neutrophils *in vivo*. [Clin Exp Immunol. 141: 315-25.](#)
  10. Peterson, M.D. *et al.* (2005) Monocyte-induced endothelial calcium signaling mediates early xenogeneic endothelial activation. [Am J Transplant 5 \(2\): 237-47.](#)
  11. Kindle, L. *et al.* (2005) Human microvascular endothelial cell activation by IL-1 and TNF-alpha stimulates the adhesion and transendothelial migration of circulating human CD14+ monocytes that develop with RANKL into functional osteoclasts. [J Bone Miner Res. 21: 193-206.](#)
  12. Corvaisier, M. *et al.* (2005) V gamma 9V delta 2 T cell response to colon carcinoma cells. [J Immunol. 175: 5481-8.](#)
  13. Kahler, C.M. (2007) Peripheral infusion of rat bone marrow derived endothelial progenitor cells leads to homing in acute lung injury. [Respir Res. 8: 50.](#)
  14. Holzwarth, C. *et al.* (2010) Low physiologic oxygen tensions reduce proliferation and differentiation of human multipotent mesenchymal stromal cells. [BMC Cell Biol. 11: 11.](#)
  15. Ruschulte, H. *et al.* (2011) Adrenoceptor stimulation does not affect ICAM-1 and VCAM-1 expression *in vitro*. [BMC Res Notes. 4: 40.](#)
  16. May, R.D. *et al.* (2012) Preclinical development of CAT-354, an IL-13 neutralizing antibody, for the treatment of severe uncontrolled asthma. [Br J Pharmacol. 166 \(1\): 177-93.](#)
  17. Murphy, A.J. *et al.* (2013) Anti-inflammatory functions of apolipoprotein a-I and high-density lipoprotein are preserved in trimeric apolipoprotein a-I. [J Pharmacol Exp Ther. 344: 41-9.](#)
  18. Chadderdon, S.M. *et al.* (2014) Proinflammatory endothelial activation detected by molecular imaging in obese nonhuman primates coincides with onset of insulin resistance and progressively increases with duration of insulin resistance. [Circulation. 129 \(4\): 471-8.](#)
  19. Old, E.A. *et al.* (2014) Monocytes expressing CX3CR1 orchestrate the development of vincristine-induced pain. [J Clin Invest. 124 \(5\): 2023-36.](#)
  20. Zhang, J. *et al.* (2016) Bone mesenchymal stem cells differentiate into myofibroblasts in the tumor microenvironment. [Oncol Lett. 12 \(1\): 644-50.](#)
  21. Lim, J.L. *et al.* (2016) Protective effects of monomethyl fumarate at the inflamed blood-brain barrier. [Microvasc Res. 105: 61-9.](#)
  22. Schmidt, M. *et al.* (2016) Methods to Investigate the Role of Toll-Like Receptors in Allergic Contact Dermatitis. [Methods Mol Biol. 1390: 319-40.](#)
  23. Al-Qaissi, A. *et al.* (2019) The CD105:CD106 microparticle ratio is CD106 dominant in polycystic ovary syndrome compared to type 2 diabetes and healthy subjects. [Endocrine. 66 \(2\): 220-225.](#)
  24. Lauranzano, E. *et al.* (2019) A Microfluidic Human Model of Blood-Brain Barrier Employing Primary Human Astrocytes. [Adv Biosyst. 3 \(7\): e1800335.](#)
  25. Hara, H. *et al.* (2021) Stable expression of the human thrombomodulin transgene in pig endothelial cells is associated with a reduction in the inflammatory response. [Cytokine. 148: 155580.](#)
  26. Kohs, T.C.L. *et al.* (2022) Ibrutinib Inhibits BMX-Dependent Endothelial VCAM-1

Expression *In Vitro* and Pro-Atherosclerotic Endothelial Activation and Platelet Adhesion *In Vivo*. [Cell Mol Bioeng. 15 \(3\): 231-43.](#)

27. Connolly, D.M. *et al.* (2023) Early Human Pathophysiological Responses to Exertional Hypobaric Decompression Stress. [Aerosp Med Hum Perform. 94 \(10\): 738-49.](#)

28. Bacci, M. *et al.* (2023) Development of Personalized Thrombogenesis and Thrombin Generation Assays to Assess Endothelial Dysfunction in Cardiovascular Diseases. [Biomedicines. 11 \(6\):1669.](#)

---

<b>Further Reading</b>	1. Kong, D.H. <i>et al.</i> (2018) Emerging Roles of Vascular Cell Adhesion Molecule-1 (VCAM-1) in Immunological Disorders and Cancer. <a href="#">Int J Mol Sci. 19 (4): 1057.</a>
------------------------	---

---

<b>Storage</b>	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.

---

<b>Guarantee</b>	12 months from date of despatch
------------------	---------------------------------

---

<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA907F10041">https://www.bio-rad-antibodies.com/SDS/MCA907F10041</a>
--------------------------------------	--

---

<b>Regulatory</b>	For research purposes only
-------------------	----------------------------

---

## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

### Recommended Useful Reagents

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

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

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

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

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

**Europe**

Tel: +49 (0) 89 8090 95 21

Fax: +49 (0) 89 8090 95 50

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

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)  
'M385348:210513'

Printed on 18 Jan 2024