Datasheet: MCA907A647

BATCH NUMBER 172676

Description:	MOUSE ANTI HUMAN CD106:Alexa Fluor® 647
Specificity:	CD106
Other names:	VCAM-1
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	1.G11B1
Isotype:	IgG1
Quantity:	100 TESTS/1ml

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	▪			Neat - 1/2

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

Human

Species Cross Reactivity

Reacts with: Pig, Rhesus Monkey

N.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 Alexa Fluor 647 - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Alexa Fluor®647	650	665

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN_3) 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml
External Database Links	**UniProt:** P19320 Related reagents **Entrez Gene:** 7412 VCAM1 Related reagents
Synonyms	L1CAM
Specificity	**Mouse anti Human CD106 antibody, clone 1.G11B1** 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. Mouse anti Human CD106 antibody, clone 1.G11B1 inhibits cellular adhesion mediated by VCAM-1 (Patel 1998).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul

References

1. Thornhill, M.H. *et al.* (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. J Immunol. 146 (2): 592-8.
2. Rosenman, S.J. *et al.* (1995) Cytokine-induced expression of vascular cell adhesion molecule-1 (VCAM-1) by astrocytes and astrocytoma cell lines. J Immunol. 154 (4): 1888-99.
3. Reparon-Schuijt, C.C. *et al.* (2000) Regulation of synovial B cell survival in rheumatoid arthritis by vascular cell adhesion molecule 1 (CD106) expressed on fibroblast-like synoviocytes. Arthritis Rheum. 43 (5): 1115-21.
4. Ali, S. *et al.* (2000) Intercellular 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. Am J Pathol. 157: 313-21.
5. Faure, J.P. *et al.* (2002) Polyethylene glycol reduces early and long-term cold ischemia-reperfusion and renal medulla injury. J Pharmacol Exp Ther. 302 (3): 861-70.
6. Hauet, T. *et al.* (2002) Polyethylene glycol reduces the inflammatory injury due to cold ischemia/reperfusion in autotransplanted pig kidneys. Kidney Int. 62: 654-67.
7. Cabeza, N. *et al.* (2004) Surface expression of collagen receptor Fc receptor-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.

Further Reading	1. Kong, D.H. *et al.* (2018) Emerging Roles of Vascular Cell Adhesion Molecule-1 (VCAM-1) in Immunological Disorders and Cancer. Int J Mol Sci. 19 (4): 1057.
Storage	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.
Guarantee	12 months from date of despatch
Acknowledgements	This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchased product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or outlicensing@thermofisher.com
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA907A647
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 647 (MCA928A647)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)

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
'M437578:250316'