

# Datasheet: MCA2297

**BATCH NUMBER 167507**

|                      |                      |
|----------------------|----------------------|
| <b>Description:</b>  | RAT ANTI MOUSE CD106 |
| <b>Specificity:</b>  | CD106                |
| <b>Other names:</b>  | VCAM-1               |
| <b>Format:</b>       | Purified             |
| <b>Product Type:</b> | Monoclonal Antibody  |
| <b>Clone:</b>        | MVCAM A (429)        |
| <b>Isotype:</b>      | IgG2a                |
| <b>Quantity:</b>     | 0.25 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             | ▪   |    |                | 1/10 - 1/50        |
| Immunohistology - Frozen   | ▪   |    |                |                    |
| Immunohistology - Paraffin |     |    | ▪              |                    |
| ELISA                      |     |    | ▪              |                    |
| Immunoprecipitation        |     |    | ▪              |                    |
| Western Blotting           |     |    | ▪              |                    |
| Immunofluorescence         | ▪   |    |                |                    |

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.

|                        |   |
|------------------------|---|
| <b>Target Species</b>  | Mouse   |
| <b>Product Form</b>    | Purified IgG - liquid   |
| <b>Preparation</b>     | Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant |
| <b>Buffer Solution</b> | Phosphate buffered saline   |
| <b>Preservative</b>    | 0.09% sodium azide (NaN <sub>3</sub> )  |

## Stabilisers

Carrier Free Yes

Approx. Protein Concentrations IgG concentration 1.0 mg/ml

Immunogen Stromal cell line PA6.

## External Database Links

### UniProt:

[P29533](#)

[Related reagents](#)

### Entrez Gene:

[22329](#)

Vcam1

[Related reagents](#)

Synonyms Vcam-1

RRID AB\_566429

Fusion Partners Spleen cells from immunized Lewis rats were fused with cells of the mouse P3X63Ag8.653 myeloma cell line.

**Specificity** **Rat anti Mouse CD106 antibody, clone MVCAM A (429)** recognizes murine vascular adhesion molecule 1 (VCAM-1), a cell surface glycoprotein that is also known as CD106. CD106 is expressed predominantly on endothelial cells and expression is up-regulated during inflammation. The ligand for CD106 is the alpha 4 subunit (CD49d) of the integrin VLA-4 (CD49d/CD29).

Rat anti Mouse CD106 antibody, clone MVCAM A (429) is reported to partially block VCAM-1 mediated functions ([Kinashi and Springer 1994](#)).

**Flow Cytometry** Use 10µl of the suggested working dilution to label 10<sup>6</sup> cells in 100µl

## References

1. Lau, H.Y. and Bhatia, M. (2007) Effect of CP-96,345 on the expression of adhesion molecules in acute pancreatitis in mice. [Am J Physiol Gastrointest Liver Physiol. 292: G1283-92.](#)
2. Hamada, T. *et al.* (2008) Metalloproteinase-9 deficiency protects against hepatic ischemia/reperfusion injury. [Hepatology. 47: 186-98.](#)
3. Hamada, T. *et al.* (2009) Inducible nitric oxide synthase deficiency impairs matrix metalloproteinase-9 activity and disrupts leukocyte migration in hepatic ischemia/reperfusion injury. [Am J Pathol. 174: 2265-77.](#)
4. Hall, L.J. *et al.* (2010) Probing local innate immune responses after mucosal immunisation. [J Immune Based Ther Vaccines. 8: 5.](#)
5. Woo, J.M. *et al.* (2010) Treatment with apolipoprotein A-1 mimetic peptide reduces lupus-like manifestations in a murine lupus model of accelerated atherosclerosis. [Arthritis Res Ther. 12\(3\):R93.](#)
6. Chen, Q. *et al.* (2011) Macrophage binding to receptor VCAM-1 transmits survival signals in breast cancer cells that invade the lungs. [Cancer Cell. 20 \(4\): 538-49.](#)

7. Kuriyama, N. *et al.* (2011) Tenascin-C: a novel mediator of hepatic ischemia and reperfusion injury. [Hepatology. 54 \(6\): 2125-36.](#)
8. David, S. *et al.* (2011) Acute administration of recombinant Angiopoietin-1 ameliorates multiple-organ dysfunction syndrome and improves survival in murine sepsis. [Cytokine. 55 \(2\): 251-9.](#)
9. Kumpers, P. *et al.* (2011) The synthetic tie2 agonist peptide vasculotide protects against vascular leakage and reduces mortality in murine abdominal sepsis. [Crit Care. 15 \(5\): R261.](#)
10. Winnik S *et al.* (2011) Dietary  $\alpha$ -linolenic acid diminishes experimental atherogenesis and restricts T cell-driven inflammation. [Eur Heart J. 32 \(20\): 2573-84.](#)
11. Püntener, U. *et al.* (2012) Long-term impact of systemic bacterial infection on the cerebral vasculature and microglia. [J Neuroinflammation. 9: 146.](#)
12. Li, M. *et al.* (2014) The indoleamine 2,3-dioxygenase pathway controls complement-dependent enhancement of chemo-radiation therapy against murine glioblastoma. [J Immunother Cancer. 2: 21.](#)
13. Braach, N. *et al.* (2014) RAGE controls activation and anti-inflammatory signalling of protein C. [PLoS One. 9 \(2\): e89422.](#)
14. El Amki, M. *et al.* (2018) Improved Reperfusion and Vasculoprotection by the Poly(ADP-Ribose)Polymerase Inhibitor PJ34 After Stroke and Thrombolysis in Mice. [Mol Neurobiol. 55 \(12\): 9156-68.](#)
15. Basic, M. *et al.* (2020) Lymph Node Stromal Cells From Different Draining Areas Distinctly Regulate the Development of Chronic Intestinal Inflammation. [Front Immunol. 11: 549473.](#)

|                                      |   |
|--------------------------------------|---|
| <b>Storage</b>                       | <p>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.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.</p> |
| <b>Guarantee</b>                     | 12 months from date of despatch   |
| <b>Health And Safety Information</b> | <p>Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA2297">https://www.bio-rad-antibodies.com/SDS/MCA2297</a></p> <p>10040</p>  |
| <b>Regulatory</b>                    | For research purposes only  |

## Related Products

### Recommended Secondary Antibodies

|                                 |                             |
|---------------------------------|-----------------------------|
| Rabbit Anti Rat IgG (STAR16...) | <a href="#">DyLight®800</a> |
| Rabbit Anti Rat IgG (STAR17...) | <a href="#">FITC</a>        |
| Goat Anti Rat IgG (STAR72...)   | <a href="#">HRP</a>         |
| Goat Anti Rat IgG (STAR69...)   | <a href="#">FITC</a>        |
| Goat Anti Rat IgG (STAR73...)   | <a href="#">RPE</a>         |

Rabbit Anti Rat IgG (STAR21...)

[HRP](#)

Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...) [DyLight®550](#), [DyLight®650](#), [DyLight®800](#)

Goat Anti Rat IgG (STAR131...)

[Alk. Phos.](#), [Biotin](#)

## Recommended Negative Controls

[RAT IgG2a NEGATIVE CONTROL \(MCA1212\)](#)

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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)

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