

# Datasheet: MCA947GA

**BATCH NUMBER 163287**

<b>Description:</b>	RAT ANTI MOUSE CD169
<b>Specificity:</b>	CD169
<b>Other names:</b>	SIALOADHESIN
<b>Format:</b>	Purified
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	MOMA-1
<b>Isotype:</b>	IgG2a
<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			▪	
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>Species Cross Reactivity</b>	Does not react with: Human, Rat
<b>Product Form</b>	Purified IgG - liquid
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	<0.1% Sodium Azide (NaN <sub>3</sub> )
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Stromal (reticular) elements from mouse lymph nodes.
External Database Links	<p><b>UniProt:</b></p> <p><a href="#">Q62230</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b></p> <p><a href="#">20612</a>    Siglec1    <a href="#">Related reagents</a></p>
Synonyms	Sa, Sn
Fusion Partners	Spleen cells from hyperimmunized mice were fused with cells from the murine SP2/0 myeloma.
Specificity	<p><b>Rat anti Mouse CD169, clone MOMA-1</b> recognizes murine CD169, also known as sialoadhesin or Siglec-1. CD169 is a lectin-like receptor expressed by certain populations of macrophages including marginal zone metallophils of the spleen, subcapsular macrophages of lymph nodes and stromal macrophages in bone marrow (<a href="#">Morris et al. 1991</a>).</p> <p>CD169 is a ~185 kDa sialic acid binding receptor containing 17 immunoglobulin-like domains (<a href="#">Crocker et al. 1992</a>). Expression of CD169 can be induced on macrophages in culture by a serum factor and further modulated by cytokine exposure (<a href="#">McWilliam et al. 1992</a>).</p> <p>Rat anti mouse CD169, clone MOMA-1 has been used for the <i>in vivo</i> depletion of specific macrophage populations (<a href="#">Kraal et al. 1988</a>).</p>
Histology Positive Control Tissue	Lymphoid tissue
References	<ol style="list-style-type: none"> <li>1. Kaisho, T. <i>et al.</i> (2001) I kappaB kinase alpha is essential for mature B cell development and function. <a href="#">J Exp Med. 193: 417-26.</a></li> <li>2. Alcamo, E. <i>et al.</i> (2002) Requirement for the NF-κB family member RelA in the development of secondary lymphoid organs. <a href="#">J Exp Med. 195: 233-44.</a></li> <li>3. Miosge, L.A. <i>et al.</i> (2002) Analysis of an ethylnitrosourea-generated mouse mutation defines a cell intrinsic role of nuclear factor kappaB2 in regulating circulating B cell numbers. <a href="#">J Exp Med.196: 1113-9.</a></li> <li>4. Karlsson, M.C. <i>et al.</i> (2003) Macrophages control the retention and trafficking of B lymphocytes in the splenic marginal zone. <a href="#">J Exp Med. 198: 333-40.</a></li> <li>5. Whipple, E.C. <i>et al.</i> (2004) Analyses of the <i>in vivo</i> trafficking of stoichiometric doses of</li> </ol>

- an anti-complement receptor 1/2 monoclonal antibody infused intravenously in mice. [J Immunol. 173 \(4\): 2297-306.](#)
6. Benlagha, K. *et al.* (2004) Mechanisms governing B cell developmental defects in invariant chain-deficient mice. [J Immunol. 172: 2076-83.](#)
7. Girkontaite, I. *et al.* (2004) The sphingosine-1-phosphate (S1P) lysophospholipid receptor S1P3 regulates MAdCAM-1+ endothelial cells in splenic marginal sinus organization. [J Exp Med. 200 \(11\): 1491-501.](#)
8. Ferguson, A.R. *et al.* (2004) Marginal zone B cells transport and deposit IgM-containing immune complexes onto follicular dendritic cells. [Int Immunol. 16 \(10\): 1411-22.](#)
9. Höpken, U.E. *et al.* (2004) Distinct and overlapping roles of CXCR5 and CCR7 in B-1 cell homing and early immunity against bacterial pathogens. [J Leukoc Biol. 76 \(3\): 709-18.](#)
10. Cariappa, A. *et al.* (2005) The CD9 tetraspanin is not required for the development of peripheral B cells or for humoral immunity. [J Immunol. 175: 2925-30.](#)
11. Acevedo-Suárez, C.A. *et al.* (2005) Uncoupling of anergy from developmental arrest in anti-insulin B cells supports the development of autoimmune diabetes. [J Immunol. 174 \(2\): 827-33.](#)
12. Rolf, J. *et al.* (2005) The enlarged population of marginal zone/CD1d(high) B lymphocytes in nonobese diabetic mice maps to diabetes susceptibility region Idd11. [J Immunol. 174: 4821-7.](#)
13. Kanayama, N. *et al.* (2005) Analysis of marginal zone B cell development in the mouse with limited B cell diversity: role of the antigen receptor signals in the recruitment of B cells to the marginal zone. [J Immunol. 174 \(3\): 1438-45.](#)
14. Oetke, C. *et al.* (2006) The antigen recognized by MOMA-1 is sialoadhesin. [Immunol Lett. 106: 96-98.](#)
15. Caton, M.L. *et al.* (2007) Notch-RBP-J signaling controls the homeostasis of CD8-dendritic cells in the spleen. [J Exp Med. 204 \(7\): 1653-64.](#)
16. Cadman, E.T. *et al.* (2008) Alterations of splenic architecture in malaria are induced independently of Toll-like receptors 2, 4, and 9 or MyD88 and may affect antibody affinity. [Infect Immun. 76: 3924-31.](#)
17. Gangadharan, B. *et al.* (2008) Murine gamma herpesvirus-induced fibrosis is associated with the development of alternatively activated macrophages. [J Leukoc Biol. 84: 50-8.](#)
18. Awasthi, A. *et al.* (2010) Rap1b facilitates NK cell functions via IQGAP1-mediated signalosomes. [J Exp Med. 207: 1923-38.](#)
19. Tumanov, A.V. *et al.* (2010) Cellular source and molecular form of TNF specify its distinct functions in organization of secondary lymphoid organs. [Blood. 116 \(18\): 3456-64.](#)
20. Mattsson, J. *et al.* (2011) Complement activation and complement receptors on follicular dendritic cells are critical for the function of a targeted adjuvant. [J Immunol. 187: 3641-52.](#)
21. Carnrot, C. *et al.* (2011) Marginal zone B cells are naturally reactive to collagen type II and are involved in the initiation of the immune response in collagen-induced arthritis. [Cell Mol Immunol. 8 \(4\): 296-304.](#)
22. Rehm, A. *et al.* (2011) Cooperative function of CCR7 and lymphotoxin in the formation of a lymphoma-permissive niche within murine secondary lymphoid organs. [Blood. 118 \(4\): 1020-33.](#)
23. Birjandi, S.Z. *et al.* (2011) Alterations in marginal zone macrophages and marginal zone B cells in old mice. [J Immunol. 186: 3441-51.](#)

24. Bhattacharyya, S. *et al.* (2011) NFATc1 affects mouse splenic B cell function by controlling the calcineurin-NFAT signaling network. [J Exp Med. 208 \(4\): 823-39.](#)
25. Muppidi, J.R. *et al.* (2011) Cannabinoid receptor 2 positions and retains marginal zone B cells within the splenic marginal zone. [J Exp Med. 208 \(10\): 1941-8.](#)
26. Zhou, Z. *et al.* (2011) Autoreactive marginal zone B cells enter the follicles and interact with CD4<sup>+</sup> T cells in lupus-prone mice. [BMC Immunol. 12:7.](#)
27. Jang, I.K. *et al.* (2011) Growth-factor receptor-bound protein-2 (Grb2) signaling in B cells controls lymphoid follicle organization and germinal center reaction. [Proc Natl Acad Sci U S A. 108: 7926-31.](#)
28. Zhang, Z. *et al.* (2012) Notch-RBP-J-Independent Marginal Zone B Cell Development in IgH Transgenic Mice with V(H) Derived from a Natural Polyreactive Antibody. [PLoS One. 7: e38894.](#)
29. Flores, M. *et al.* (2015) FcγRIIB prevents inflammatory type I IFN production from plasmacytoid dendritic cells during a viral memory response. [J Immunol. 194 \(9\): 4240-50.](#)
30. Matsuda T *et al.* (2015) The immunosenescence-related gene Zizimin2 is associated with early bone marrow B cell development and marginal zone B cell formation. [Immun Ageing. 12: 1.](#)
31. Funakoshi, S. *et al.* (2015) BILL-cadherin/cadherin-17 contributes to the survival of memory B cells. [PLoS One. 10 \(1\): e0117566.](#)
32. Xing Y *et al.* (2015) Positive Selection of Natural Poly-Reactive B Cells in the Periphery Occurs Independent of Heavy Chain Allelic Inclusion. [PLoS One. 10 \(5\): e0125747.](#)
33. Bradford, B.M. *et al.* (2016) Prion pathogenesis is unaltered following down-regulation of SIGN-R1. [Virology. 497: 337-345.](#)
34. Ding, Z. *et al.* (2016) IgE-mediated enhancement of CD4(+) T cell responses requires antigen presentation by CD8α(-) conventional dendritic cells. [Sci Rep. 6: 28290.](#)
35. Oh, D.S. *et al.* (2017) Transient Depletion of CD169<sup>+</sup> Cells Contributes to Impaired Early Protection and Effector CD8<sup>+</sup> T Cell Recruitment against Mucosal Respiratory Syncytial Virus Infection. [Front Immunol. 8: 819.](#)
36. Bogie, J.F. *et al.* (2018) CD169 is a marker for highly pathogenic phagocytes in multiple sclerosis. [Mult Scler. 24 \(3\): 290-300.](#)
37. Tsai, C.Y. *et al.* (2018) Bystander inhibition of humoral immune responses by Epstein-Barr virus LMP1. [Int Immunol. 30 \(12\): 579-90.](#)
38. Dekker, J.D. *et al.* (2019) Loss of the FOXP1 Transcription Factor Leads to Deregulation of B Lymphocyte Development and Function at Multiple Stages. [Immunohorizons. 3 \(10\): 447-62.](#)
39. Vanderkerken, M. *et al.* (2020) TAO-kinase 3 governs the terminal differentiation of NOTCH2-dependent splenic conventional dendritic cells. [Proc Natl Acad Sci U S A. 117 \(49\): 31331-31342.](#)
40. Groh, J. *et al.* (2021) Immune modulation attenuates infantile neuronal ceroid lipofuscinosis in mice before and after disease onset. [Brain Commun. 3 \(2\): fcab047.](#)
41. Quotti Tubi, L. *et al.* (2022) CK2β-regulated signaling controls B cell differentiation and function. [Front Immunol. 13: 959138.](#)
42. Ghilas, S. *et al.* (2021) Natural killer cells and dendritic epidermal γδ T cells orchestrate type 1 conventional DC spatiotemporal repositioning toward CD8<sup>+</sup> T cells [iScience. 24 \(9\): 103059.](#)
43. Lella, R.K. & Malarkannan, S. (2023) IQGAP1 Promotes Early B Cell Development, Is

Essential for the Development of Marginal Zone (MZ) B Cells, and Is Critical for Both T-Dependent and T-Independent Antibody Responses. [Preprints 2023, 2023070442](#).

44. Glaubitz, J. *et al.* (2020) Experimental pancreatitis is characterized by rapid T cell activation, Th2 differentiation that parallels disease severity, and improvement after CD4(+) T cell depletion. [Pancreatology. 20 \(8\): 1637-47](#).

45. Van, K.J.D. *et al.* (2018) Dendritic Cell Targeting mRNA Lipopolyplexes Combine Strong Antitumor T-Cell Immunity with Improved Inflammatory Safety. [ACS Nano. 12 \(10\): 9815-29](#).

<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.
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Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

<b>Guarantee</b>	12 months from date of despatch
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10040 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA947GA">https://www.bio-rad-antibodies.com/SDS/MCA947GA</a> 10040
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<b>Regulatory</b>	For research purposes only
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## 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...)	<a href="#">HRP</a>
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	<a href="#">DyLight®550</a> , <a href="#">DyLight®650</a> , <a href="#">DyLight®800</a>
Goat Anti Rat IgG (STAR131...)	<a href="#">Alk. Phos.</a> , <a href="#">Biotin</a>

### Recommended Negative Controls

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

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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