

## Datasheet: MCA469PB

<b>Description:</b>	MOUSE ANTI HUMAN CD9:Pacific Blue®
<b>Specificity:</b>	CD9
<b>Other names:</b>	MRP-1
<b>Format:</b>	Pacific Blue®
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	MM2/57
<b>Isotype:</b>	IgG2b
<b>Quantity:</b>	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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat

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: Cat, Rhesus Monkey, Bovine, Dog, Rabbit, Horse, Pig, Mink, Llama, Ferret  
Based on sequence similarity, is expected to react with: Mustelid  
**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 Pacific Blue - liquid

Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	Pacific Blue®	410	455

### Preparation

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

Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml
Immunogen	Human platelet membranes
External Database Links	<p><b>UniProt:</b>  <a href="#">P21926</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">928</a>    CD9    <a href="#">Related reagents</a></p>
Synonyms	MIC3, TSPAN29
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells from the SP2/0 mouse myeloma line
Specificity	<p><b>Mouse anti Human CD9 antibody, clone MM2/57</b> recognizes human leukocyte antigen MIC3 also known as MRP-1 or CD9. CD9 is a 228 amino acid multi pass membrane glycoprotein belonging to the tetraspanin family with a molecular weight of ~24 kDa expressed by platelets, monocytes, some lymphocytes and endothelial cells.</p> <p>Mouse anti Human CD9 antibody, clone MM2/57 recognizes a conserved epitope on CD9 present on a wide range of mammalian species.</p> <p>Clone MM2/57 has shown weak cross reactivity to porcine CD9 (<a href="#">Milburn, et al. 2021</a>).</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label $1 \times 10^6$ cells in 100ul
References	<ol style="list-style-type: none"> <li>1. Ed Knapp W. <i>et al.</i> (1989) Leucocyte Typing IV Oxford University Press.</li> <li>2. Jennings, L. K. <i>et al.</i> (1995) CD9 cluster workshop report: cell surface binding and functional analysis. In S.F. Sclossman. <i>et al.</i> Editors. 1995. Leucocyte Typing V. White Cell Differentiation Antigens. Oxford University Press, New York, NY. 1249-1251.</li> <li>3. Löffler, S. <i>et al.</i> (1997) CD9, a tetraspan transmembrane protein, renders cells susceptible to canine distemper virus. <a href="#">J Virol. 71: 42-9.</a></li> <li>4. Brodersen, R. <i>et al.</i> (1998) Analysis of the immunological cross reactivities of 213 well characterized monoclonal antibodies with specificities against various leucocyte surface antigens of human and 11 animal species. <a href="#">Vet Immunol Immunopathol. 64 (1): 1-13.</a></li> <li>5. Ferrer, M. <i>et al.</i> (1998) Pattern of expression of tetraspanin antigen genes in Burkitt lymphoma cell lines. <a href="#">Clin Exp Immunol. 113: 346-52.</a></li> <li>6. Kao, Y.R. <i>et al.</i> (2003) Tumor-associated antigen L6 and the invasion of human lung cancer cells. <a href="#">Clin Cancer Res. 9: 2807-16.</a></li> <li>7. Aasted, B. <i>et al.</i> (2007) Reactivity of monoclonal antibodies to human CD antigens with</li> </ol>

- cells from mink. [Vet Immunol Immunopathol. 119: 27-37.](#)
8. Davis, W.C. *et al.* (2007) Use of flow cytometry to identify monoclonal antibodies that recognize conserved epitopes on orthologous leukocyte differentiation antigens in goats, llamas, and rabbits. [Vet Immunol Immunopathol. 119: 123-30.](#)
  9. Meister, R.K. *et al.* (2007) Progress in the discovery and definition of monoclonal antibodies for use in feline research. [Vet Immunol Immunopathol. 119: 38-46.](#)
  10. Martel, C.J. & Aasted, B. (2009) Characterization of antibodies against ferret immunoglobulins, cytokines and CD markers. [Vet Immunol Immunopathol. 132:109-15.](#)
  11. Müller, T. *et al.* (2009) A novel embryonic stem cell line derived from the common marmoset monkey (*Callithrix jacchus*) exhibiting germ cell-like characteristics. [Hum Reprod. 24: 1359-72.](#)
  12. Kubota, H. *et al.* (2011) Glial cell line-derived neurotrophic factor and endothelial cells promote self-renewal of rabbit germ cells with spermatogonial stem cell properties. [FASEB J. 25 \(8\): 2604-14.](#)
  13. Hogue, I.B. *et al.* (2011) Gag induces the coalescence of clustered lipid rafts and tetraspanin-enriched microdomains at HIV-1 assembly sites on the plasma membrane. [J Virol. 85 \(19\): 9749-66.](#)
  14. Viswanathan, K. *et al.* (2017) Quantitative membrane proteomics reveals a role for tetraspanin enriched microdomains during entry of human cytomegalovirus. [PLoS One. 12 \(11\): e0187899.](#)
  15. Bearden, R.N. *et al.* (2017) *In-vitro* characterization of canine multipotent stromal cells isolated from synovium, bone marrow, and adipose tissue: a donor-matched comparative study. [Stem Cell Res Ther. 8 \(1\): 218.](#)
  16. Jackson, C.E. *et al.* (2017) Effects of Inhibiting VPS4 Support a General Role for ESCRTs in Extracellular Vesicle Biogenesis. [Biophys J. 113 \(6\): 1342-1352.](#)
  17. Fish, E.J. *et al.* (2018) Malignant canine mammary epithelial cells shed exosomes containing differentially expressed microRNA that regulate oncogenic networks. [BMC Cancer. 18 \(1\): 832.](#)
  18. Wąchalska, M. *et al.* (2020) Palmitoylated mNeonGreen Protein as a Tool for Visualization and Uptake Studies of Extracellular Vesicles. [Membranes \(Basel\). 10 \(12\): 373.](#)
  19. Fu, T.S. *et al.* (2023) Biomimetic vascularized adipose-derived mesenchymal stem cells bone-periosteum graft enhances angiogenesis and osteogenesis in a male rabbit spine fusion model. [Bone Joint Res. 12 \(12\): 722-33.](#)
  20. Kwasnik, M. *et al.* (2023) Protein-Coding Region Derived Small RNA in Exosomes from Influenza A Virus-Infected Cells. [Int J Mol Sci. 24 \(1\): 867.](#)
  21. Grabowska, K. *et al.* (2020) Alphaherpesvirus gB Homologs Are Targeted to Extracellular Vesicles, but They Differentially Affect MHC Class II Molecules. [Viruses. 12 \(4\): 429.](#)
  22. Milburn, J.V. *et al.* (2021) Expression of CD9 on porcine lymphocytes and its relation to T cell differentiation and cytokine production. [Dev Comp Immunol. 121: 104080.](#)

## 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.

---

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

---

<b>Acknowledgements</b>	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 purchase 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 <a href="mailto:outlicensing@thermofisher.com">outlicensing@thermofisher.com</a>
-------------------------	--

---

<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA469PB">https://www.bio-rad-antibodies.com/SDS/MCA469PB</a> 10041
--------------------------------------	---

---

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

---

## Related Products

### Recommended Negative Controls

[MOUSE IgG2b NEGATIVE CONTROL: Pacific Blue® \(MCA691PB\)](#)

### Recommended Useful Reagents

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

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

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

**America** 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://www.bio-rad-antibodies.com/datasheets)

"M437701:250318"

**Printed on 28 May 2025**

---

© 2025 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)