

## Datasheet: MCA469F

**BATCH NUMBER 173480**

<b>Description:</b>	MOUSE ANTI HUMAN CD9:FITC
<b>Specificity:</b>	CD9
<b>Other names:</b>	MRP-1
<b>Format:</b>	FITC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	MM2/57
<b>Isotype:</b>	IgG2b
<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

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: 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 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 1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 0.1 mg/ml
<b>Immunogen</b>	Human platelet membranes
<b>External Database Links</b>	<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>
<b>Synonyms</b>	MIC3, TSPAN29
<b>RRID</b>	AB_321492
<b>Fusion Partners</b>	Spleen cells from immunised BALB/c mice were fused with cells from the SP2/0 mouse myeloma line
<b>Specificity</b>	<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>
<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. 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</li> </ol>

- cancer cells. [Clin Cancer Res. 9: 2807-16.](#)
7. Aasted, B. *et al.* (2007) Reactivity of monoclonal antibodies to human CD antigens with 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.](#)
  23. Oraki Koshour, M. *et al.* (2025) Comparing the proteome profiling of plasma-derived extracellular vesicles in individuals with schizophrenia and healthy controls: a pilot study. [Schizophr Res. 285: 87-94.](#)
  24. Almiñana, C. *et al.* (2025) Divergent selection for litter size variability affects RNA

cargo in oviductal extracellular vesicles related to embryonic development and survival.  
[Biol Res. 58 \(1\): 63.](#)

---

**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

---

**Health And Safety Information** Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA469F>

---

**Regulatory** For research purposes only

---

## Related Products

### Recommended Negative Controls

[MOUSE IgG2b NEGATIVE CONTROL:FITC \(MCA691F\)](#)

### Recommended Useful Reagents

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

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

**Product inquiries:** [www.bio-rad-antibodies.com/technical-support](http://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](http://bio-rad-antibodies.com/datasheets)  
'M437696:250318'

**Printed on 27 May 2026**