# Datasheet: MCA2189

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| **Description:** | MOUSE ANTI MOUSE MHC CLASS I |
| **Specificity:** | MHC CLASS I |
| **Format:** | Purified |
| **Product Type:** | Monoclonal Antibody |
| **Clone:** | 2G5 |
| **Isotype:** | IgG2b |
| **Quantity:** | 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.

| | Yes | No | Not Determined | Suggested Dilution |
|---|---|---|---|---|
| Flow Cytometry | ▪ | | | 1/10 - 1/25 |
| Immunohistology - Frozen | | | ▪ | |
| Immunohistology - Paraffin | | | ▪ | |
| ELISA | | | ▪ | |
| Immunoprecipitation | ▪ | | | |
| Western Blotting | | | ▪ | |

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**

Mouse

**Species Cross Reactivity**

Reacts with: Rat, Guinea Pig, Sheep, Bovine, Pig, Human, Hamster
**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 - liquid

**Preparation**

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

**Buffer Solution**

Phosphate buffered saline

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| **Preservative Stabilisers** | 0.09% sodium azide ($NaN_3$) |
| **Carrier Free** | Yes |
| **Approx. Protein Concentrations** | IgG concentration 1.0 mg/ml |
| **Immunogen** | Purified H-2K$^b$ and H-2D$^b$ MHC-I molecules. |
| **RRID** | AB_324082 |
| **Fusion Partners** | Spleen cells from immunized C1D mice were fused with cells of the X63 myeloma cell line. |
| **Specificity** | **Mouse anti Mouse MHC Class I antibody, clone 2G5** recognizes a monomorphic epitope present on murine MHC class I molecules, expressed at varying levels on the majority of nucleated cells. The major histocompatibility complex (MHC) is a cluster of genes that are important in the immune response to infections. In mice, this complex is referred to as the histocompatibility 2 (H-2) region.<br><br>The epitope recognized by clone 2G5 is conformation dependent and is reported to be phylogenetically conserved (Claesson *et al.* 1994). Reactivity has been observed with some canine samples suggesting that this antibody may recognize a polymorphic epitope of canine MHC class I. |
| **Flow Cytometry** | Use 10µl of the suggested working dilution to label $10^6$ cells in 100µl |
| **References** | 1. Cenci, E. *et al.* (2006) Modulation of phenotype and function of dendritic cells by a therapeutic synthetic killer peptide. J Leukoc Biol. 79 (1): 40-5.<br>2. Perone, M.J. *et al.* (2006) Dendritic cells expressing transgenic galectin-1 delay onset of autoimmune diabetes in mice. J Immunol. 177 (8): 5278-89.<br>3. Giunchetti, R.C. *et al.* (2007) Immunogenicity of a killed *Leishmania* vaccine with saponin adjuvant in dogs. Vaccine. 25 (44): 7674-86.<br>4. Huang, Y.C. *et al.* (2008) CD5-low expression lymphocytes in canine peripheral blood show characteristics of natural killer cells. J Leukoc Biol. 84 (6): 1501-10.<br>5. Liu, C.C. *et al.* (2008) Transient downregulation of monocyte-derived dendritic-cell differentiation, function, and survival during tumoral progression and regression in an *in vivo* canine model of transmissible venereal tumor. Cancer Immunol Immunother. 57 (4): 479-91.<br>6. Letellier, M. *et al.* (2008) Normal adult climbing fiber monoinnervation of cerebellar Purkinje cells in mice lacking MHC class I molecules. Dev Neurobiol. 68 (8): 997-1006.<br>7. Giunchetti RC *et al.* (2008) A killed *Leishmania* vaccine with sand fly saliva extract and saponin adjuvant displays immunogenicity in dogs. Vaccine. 26 (5): 623-38.<br>8. Vitadello, M. *et al.* (2010) Myofiber stress-response in myositis: parallel investigations on patients and experimental animal models of muscle regeneration and systemic inflammation. Arthritis Res Ther. 12 (2): R52.<br>9. Gupta, A. *et al.* (2012) Efficacy of *Mycobacterium indicus pranii* immunotherapy as an |

adjunct to chemotherapy for tuberculosis and underlying immune responses in the lung. PLoS One. 7 (7): e39215.
10. Patel, G.K. *et al.* (2012) A humanized stromal bed is required for engraftment of isolated human primary squamous cell carcinoma cells in immunocompromised mice. J Invest Dermatol. 132 (2): 284-90.
11. Gupta, A. *et al.* (2012) Protective efficacy of *Mycobacterium indicus pranii* against tuberculosis and underlying local lung immune responses in guinea pig model. Vaccine. 30 (43): 6198-209.
12. Zuza, A.L. *et al.* (2016) Astrocyte response to St. Louis encephalitis virus. Virus Res. 217: 92-100.
13. Reid E *et al.* (2016) Type I and III IFNs Produced by Plasmacytoid Dendritic Cells in Response to a Member of the Flaviviridae Suppress Cellular Immune Responses. J Immunol. 196 (10): 4214-26.
14. Iwasaki, Y. *et al.* (2016) Differentiation/Purification Protocol for Retinal Pigment Epithelium from Mouse Induced Pluripotent Stem Cells as a Research Tool. PLoS One. 11 (7): e0158282.
15. Wang, Y. *et al.* (2020) Characterization of a rhodanese homologue from *Haemonchus contortus* and its immune-modulatory effects on goat immune cells *in vitro*. Parasit Vectors. 13 (1): 454.
16. Ehsan, M. *et al.* (2021) *Fasciola gigantica* tegumental calcium-binding EF-hand protein 4 exerts immunomodulatory effects on goat monocytes. Parasit Vectors. 14 (1): 276.
17. Wang, Y. *et al.* (2020) Modulatory functions of recombinant electron transfer flavoprotein α subunit protein from *Haemonchus contortus* on goat immune cells *in vitro*. Vet Parasitol. 288: 109300.

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| **Further Reading** | 1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. Vet Res. 39: 54. |
| **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.<br><br>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. |
| **Guarantee** | 12 months from date of despatch |
| **Health And Safety Information** | Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA2189<br>10040 |
| **Regulatory** | For research purposes only |

## Related Products

### Recommended Secondary Antibodies

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| Rabbit Anti Mouse IgG (STAR12...) | RPE |

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| Goat Anti Mouse IgG IgA IgM (STAR87...) | HRP |
| Goat Anti Mouse IgG (STAR76...) | RPE |
| Goat Anti Mouse IgG (STAR70...) | FITC |
| Goat Anti Mouse IgG (H/L) (STAR117...) | Alk. Phos., DyLight®488, DyLight®550, DyLight®650, DyLight®680, DyLight®800, FITC, HRP |
| Goat Anti Mouse IgG (STAR77...) | HRP |
| Rabbit Anti Mouse IgG (STAR13...) | HRP |
| Rabbit Anti Mouse IgG (STAR9...) | FITC |
| Goat Anti Mouse IgG (Fc) (STAR120...) | FITC, HRP |


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**Printed on 23 May 2024**