

## Datasheet: MCA2261GA

|                      |                            |
|----------------------|----------------------------|
| <b>Description:</b>  | MOUSE ANTI PIG SLA CLASS I |
| <b>Specificity:</b>  | SLA CLASS I                |
| <b>Format:</b>       | Purified                   |
| <b>Product Type:</b> | Monoclonal Antibody        |
| <b>Clone:</b>        | JM1E3                      |
| <b>Isotype:</b>      | IgG1                       |
| <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             | ▪   |    |                | 1/50 - 1/100       |
| Immunohistology - Frozen   |     |    | ▪              |                    |
| Immunohistology - Paraffin |     |    | ▪              |                    |
| ELISA                      |     |    | ▪              |                    |
| Immunoprecipitation        | ▪   |    |                |                    |
| Western Blotting           |     |    | ▪              |                    |
| Immunofluorescence         | ▪   |    |                |                    |
| Functional Assays (1)      |     |    | ▪              |                    |

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.

(1) **Removal of sodium azide is recommended prior to use in functional assays.**

|                                 |   |
|---------------------------------|---|
| <b>Target Species</b>           | Pig   |
| <b>Species Cross Reactivity</b> | <p>Reacts with: Human</p> <p><b>N.B.</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.</p> |
| <b>Product Form</b>             | Purified IgG - liquid   |
| <b>Preparation</b>              | 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 (NaN <sub>3</sub> )  |
| <b>Carrier Free</b>                   | Yes   |
| <b>Approx. Protein Concentrations</b> | IgG concentration 1.0 mg/ml   |
| <b>Immunogen</b>                      | Porcine peripheral blood mononuclear cells.   |
| <b>External Database Links</b>        | <b>UniProt:</b><br><a href="#">O19244</a> <a href="#">Related reagents</a>  |
| <b>Fusion Partners</b>                | Spleen cells from immunised BALB/c mice were fused with cells of the mouse SP2/0 - Ag14 myeloma cell line.  |
| <b>Specificity</b>                    | <p><b>Mouse anti Pig SLA Class I antibody, clone JM1E3</b> recognizes a monomorphic epitope expressed by porcine MHC class I molecules (SLA - 1).</p> <p>SLA - 1 is expressed by all nucleated porcine cells, but not on erythrocytes. This antibody has also been shown to cross-react with human MHC Class I, including HLA-E. (<a href="#">Galiani et al. 2002</a>)</p> <p>The major histocompatibility complex (MHC) is a cluster of genes that are important in the immune response to infections. In pigs, this is referred to as the swine leukocyte antigen (SLA) region.</p> <p>Mouse anti pig SLA class I, clone JM1E3 has been reported to block the interaction of MHC Class I antigens with inhibitory NK cell receptors (<a href="#">Galiani et al. 2002</a>).</p>  |
| <b>Flow Cytometry</b>                 | Use 10µl of the suggested working dilution to label 10 <sup>6</sup> cells in 100µl  |
| <b>References</b>                     | <ol style="list-style-type: none"> <li>Galiani, D. <i>et al.</i>. (2002) A new monoclonal antibody (JM1E3) specific for porcine SLA Class I antigen recognises HLA Class I antigens and interferes with HLA recognition by human NK inhibitory receptors. In <i>Leucocyte Typing VII</i>. Edited by Mason, D. <i>et al.</i>. Oxford University Press pp 437-39.</li> <li>Jeong, H.J. <i>et al.</i> (2010) Comparative measurement of cell-mediated immune responses of swine to the M and N proteins of porcine reproductive and respiratory syndrome virus. <a href="#">Clin Vaccine Immunol. 17: 503-12.</a></li> <li>Hurtado, C. <i>et al.</i> (2011) The African swine fever virus lectin EP153R modulates the surface membrane expression of MHC class I antigens. <a href="#">Arch Virol. 156: 219-34.</a></li> <li>Ding, G. <i>et al.</i> (2010) Suppression of T cell proliferation by root apical papilla stem cells in vitro. <a href="#">Cells Tissues Organs. 191: 357-64.</a></li> <li>Park, J.Y. <i>et al.</i> (2008) Characterization of interaction between porcine reproductive and respiratory syndrome virus and porcine dendritic cells. <a href="#">J Microbiol Biotechnol. 18:</a></li> </ol> |

[1709-16.](#)

6. Van Parys, A. *et al.* (2012) Salmonella Typhimurium induces SPI-1 and SPI-2 regulated and strain dependent downregulation of MHC II expression on porcine alveolar macrophages. [Vet Res. 43: 52.](#)
7. Löndt, B.Z. *et al.* (2013) Enhanced infectivity of H5N1 highly pathogenic avian influenza (HPAI) virus in pig *ex vivo* respiratory tract organ cultures following adaptation by *in vitro* passage. [Virus Res. 178\(2\):383-91.](#)
8. Blázquez, R. *et al.* (2015) Intrapericardial administration of mesenchymal stem cells in a large animal model: a bio-distribution analysis. [PLoS One. 10 \(3\): e0122377.](#)
9. Rayat, G.R. *et al.* (2016) First update of the International Xenotransplantation Association consensus statement on conditions for undertaking clinical trials of porcine islet products in type 1 diabetes - Chapter 3: Porcine islet product manufacturing and release testing criteria. [Xenotransplantation. 23 \(1\): 38-45.](#)
10. Suarez-Pinzon, W. *et al.* (2015) A Novel Protocol for Culturing Adult Porcine Islets for Transplantation in Type 1 Diabetic Patients [Minn Acad Sci J Student Res.3: 1-11.](#)
11. Richmond, O. *et al.* (2015) PD-L1 expression is increased in monocyte derived dendritic cells in response to porcine circovirus type 2 and porcine reproductive and respiratory syndrome virus infections. [Vet Immunol Immunopathol. 168 \(1-2\): 24-9.](#)
12. Iwase H *et al.* (2015) Initial *in vivo* experience of pig artery patch transplantation in baboons using mutant MHC (CIITA-DN) pigs. [Transpl Immunol. 32 \(2\): 99-108.](#)
13. Park, K.M. *et al.* (2013) Generation of porcine induced pluripotent stem cells and evaluation of their major histocompatibility complex protein expression *in vitro*. [Vet Res Commun. 37 \(4\): 293-301.](#)
14. Le, T.M. *et al.* (2017)  $\beta$ 2-microglobulin gene duplication in cetartiodactyla remains intact only in pigs and possibly confers selective advantage to the species. [PLoS One. 12 \(8\): e0182322.](#)
15. Linard, C. *et al.* (2018) Autologous Bone Marrow Mesenchymal Stem Cells Improve the Quality and Stability of Vascularized Flap Surgery of Irradiated Skin in Pigs. [Stem Cells Transl Med. 7 \(8\): 569-582.](#)
16. Arenal, Á. *et al.* (2022) Effects of Cardiac Stem Cell on Postinfarction Arrhythmogenic Substrate. [Int J Mol Sci. 23 \(24\): 16211.](#)

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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.](#)

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**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.

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**Guarantee**

12 months from date of despatch

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**Health And Safety Information**

Material Safety Datasheet documentation #10040 available at:  
10040: <https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf>

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Secondary Antibodies

|   |   |
|---|---|
| Goat Anti Mouse IgG (STAR77...)         | <a href="#">HRP</a>   |
| Rabbit Anti Mouse IgG (STAR12...)       | <a href="#">RPE</a>   |
| Goat Anti Mouse IgG (STAR70...)         | <a href="#">FITC</a>  |
| Goat Anti Mouse IgG IgA IgM (STAR87...) | <a href="#">Alk. Phos.</a> , <a href="#">HRP</a>  |
| Goat Anti Mouse IgG (STAR76...)         | <a href="#">RPE</a>   |
| Goat Anti Mouse IgG (H/L) (STAR117...)  | <a href="#">Alk. Phos.</a> , <a href="#">DyLight@488</a> , <a href="#">DyLight@550</a> ,<br><a href="#">DyLight@650</a> , <a href="#">DyLight@680</a> , <a href="#">DyLight@800</a> ,<br><a href="#">FITC</a> , <a href="#">HRP</a> |
| Rabbit Anti Mouse IgG (STAR13...)       | <a href="#">HRP</a>   |
| Goat Anti Mouse IgG (Fc) (STAR120...)   | <a href="#">FITC</a> , <a href="#">HRP</a>  |
| Rabbit Anti Mouse IgG (STAR9...)        | <a href="#">FITC</a>  |

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

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

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)  
'M413652:221123'

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