

## Datasheet: MCA2261GA

**BATCH NUMBER 151121**

<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 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 the appropriate negative/positive controls.

(1) **Removal of sodium azide is recommended prior to use in functional assays - Bio-Rad recommend the use of [EQU003](#) for this purpose.**

### Target Species

Pig

### Species Cross Reactivity

Reacts with: Human

**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.

<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>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). 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 10 ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul.
<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: 1709-16.</a></li> <li>Van Parys, A. <i>et al.</i> (2012) Salmonella Typhimurium induces SPI-1 and SPI-2 regulated and strain dependent downregulation of MHC II expression on porcine alveolar</li> </ol>

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.](#)

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<b>Further Reading</b>	1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. <a href="#">Vet Res. 39: 54.</a>
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<b>Storage</b>	Store at +4°C or at -20°C if preferred.  This product should be stored undiluted.
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Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

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<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: 10040: <a href="https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf">https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf</a>
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<b>Regulatory</b>	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> , <a href="#">DyLight®650</a> , <a href="#">DyLight®680</a> , <a href="#">DyLight®800</a> , <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 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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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)

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