

Datasheet: MCA2261GA

Description:	MOUSE ANTI PIG SLA CLASS I
Specificity:	SLA CLASS I
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	JM1E3
Isotype:	IgG1
Quantity:	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.

	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.
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN ₃)
Carrier Free	Yes

Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Porcine peripheral blood mononuclear cells.
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse SP2/0 - Ag14 myeloma cell line.
Specificity	Mouse anti Pig SLA Class I antibody, clone JM1E3 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. (Galiani et al. 2002) 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. 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 (Galiani et al. 2002).
Flow Cytometry	Use 10 ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	1. 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 Leucocyte Typing VII. Edited by Mason, D. <i>et al.</i>. Oxford University Press pp 437-39. 2. 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. Clin Vaccine Immunol. 17: 503-12. 3. Hurtado, C. <i>et al.</i> (2011) The African swine fever virus lectin EP153R modulates the surface membrane expression of MHC class I antigens. Arch Virol. 156: 219-34. 4. Ding, G. <i>et al.</i> (2010) Suppression of T cell proliferation by root apical papilla stem cells in vitro. Cells Tissues Organs. 191: 357-64. 5. Park, J.Y. <i>et al.</i> (2008) Characterization of interaction between porcine reproductive and respiratory syndrome virus and porcine dendritic cells. J Microbiol Biotechnol. 18: 1709-16. 6. 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 macrophages. Vet Res. 43: 52. 7. Löndt, B.Z. <i>et al.</i> (2013) Enhanced infectivity of H5N1 highly pathogenic avian influenza (HPAI) virus in pig <i>ex vivo</i> respiratory tract organ cultures following adaptation by <i>in vitro</i> passage. Virus Res. 178(2):383-91. 8. Blázquez R <i>et al.</i> (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. <i>et al.</i> (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. <i>et al.</i> (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. <i>et al.</i> (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 <i>et al.</i> (2015) Initial <i>in vivo</i> experience of pig artery patch transplantation in baboons using mutant MHC (CIITA-DN) pigs. Transpl Immunol. 32 (2): 99-108.

13. 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.](#)
14. Park KM *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.](#)
15. Le, T.M. *et al.* (2017) β 2-microglobulin gene duplication in cetartiodactyla remains intact only in pigs and possibly confers selective advantage to the species. [PLoS One. 12 \(8\): e0182322.](#)

Further Reading	1. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. Vet Res. 39: 54.
Storage	Store at +4°C or at -20°C if preferred. This product should be stored undiluted. 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.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos. , HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR8...)	DyLight®800
Goat Anti Mouse IgG (STAR70...)	FITC
Rabbit Anti Mouse IgG (STAR13...)	HRP
Human Anti Mouse IgG1 (HCA036...)	HRP
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight®488 , DyLight®549 , DyLight®649 , DyLight®680 , DyLight®800 , FITC , HRP

Recommended Negative Controls

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

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: 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	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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