

Datasheet: MCA1972GA

Description:	MOUSE ANTI PIG CD18a
Specificity:	CD18a
Other names:	INTEGRIN BETA 2 CHAIN
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	PNK-I
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 - 1/200
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation	▪			
Western Blotting			▪	
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) This product contains sodium azide, removal by dialysis is recommended prior to use in functional assays.

Target Species	Pig
Species Cross Reactivity	<p>Reacts with: Camel</p> <p>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.</p>
Product Form	Purified IgG - liquid

Preparation	Purified IgG prepared by affinity chromatography on Protein G 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 large granular lymphocytes.
External Database Links	<p>UniProt: P53714 Related reagents</p> <p>Entrez Gene: 396943 ITGB2 Related reagents</p>
Synonyms	CD18
Fusion Partners	Spleen cells from immunized Balb/c mice were fused with cells of the mouse P3-X63-Ag8.653 myeloma cell line.
Specificity	<p>Mouse anti Pig CD18a, clone PNK-I recognizes porcine CD18a. PNK-I was clustered as CD18a at the Second International Workshop to Define Swine Cluster of Differentiation (CD) Antigens (Saalmuller et al. 1998). Clone PNK-I immunoprecipitates proteins of ~166 kDa, ~155 kDa and ~95 kDa under non-reducing conditions, specifically recognizing the 95 kDa protein, consistent with the integrin β2 chain (CD18). PNK-I inhibits porcine NK cell activity independent of any effect on antibody dependent cellular cytotoxicity (Dato and Kim 1990).</p> <p>CD18 is a single pass type I transmembrane protein and is expressed on all leukocytes and is involved in a variety of cell functions. CD18 acts as a receptor for several ICAM molecules effecting intercellular adhesion functions, it is also involved in the recognition of a variety of extracellular substrate molecules.</p> <p>CD18 acts as a receptor for a number of leukotoxins produced by fungi and bacteria. Clone PNK-I is able to ameliorate the effects of these leukotoxins by blocking binding of the toxins to the CD18 receptor (Chen et al. 2011).</p>
Flow Cytometry	Use 10µl of the suggested working dilution to label 10 ⁶ cells in 100µl
References	1. Dato, M.E. & Kim, Y.B. (1990) Characterization and utilization of a monoclonal antibody inhibiting porcine natural killer cell activity for isolation of natural killer and killer cells. J Immunol. 144 (11): 4452-62.

2. Haverson, K. *et al.* (1999) T-cell populations in the pig intestinal lamina propria: memory cells with unusual phenotypic characteristics. [Immunology 96: 66-73.](#)
3. Vanden Bergh, P.G. *et al.* (2008) Probing of Actinobacillus pleuropneumoniae ApxIIIA toxin-dependent cytotoxicity towards mammalian peripheral blood mononucleated cells. [BMC Res Notes 1:121.](#)
4. Ebdrup, L. *et al.* (2008) Dynamic expression of the signal regulatory protein alpha and CD18 on porcine PBMC during acute endotoxaemia. [Scand J Immunol. 68:430-7.](#)
5. Vanden Bergh, P.G. *et al.* (2009) Porcine CD18 mediates Actinobacillus pleuropneumoniae ApxIII species-specific toxicity. [Vet Res. 40:1-10.](#)
6. Chen, Z.W. *et al.* (2011) Mechanisms underlying Actinobacillus pleuropneumoniae exotoxin ApxI induced expression of IL-1 β , IL-8 and TNF- α in porcine alveolar macrophages. [Vet Res. 42:25.](#)

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.

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/MCA1972GA>
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Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

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| Goat Anti Mouse IgG (STAR77...) | HRP |
| Rabbit Anti Mouse IgG (STAR12...) | RPE |
| Goat Anti Mouse IgG IgA IgM (STAR87...) | Alk. Phos. , HRP |
| Goat Anti Mouse IgG (STAR76...) | RPE |
| Rabbit Anti Mouse IgG (STAR13...) | HRP |
| 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 |
| Rabbit Anti Mouse IgG (STAR9...) | FITC |
| Goat Anti Mouse IgG (Fc) (STAR120...) | 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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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M412403:221111'

Printed on 18 Jan 2024

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