

## Datasheet: MCA1972F

**BATCH NUMBER 1015**

<b>Description:</b>	MOUSE ANTI PIG CD18a:FITC
<b>Specificity:</b>	CD18a
<b>Other names:</b>	INTEGRIN BETA 2 CHAIN
<b>Format:</b>	FITC
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	PNK-I
<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	▪			Neat

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

### Target Species

Pig

### Species Cross Reactivity

Reacts with: Camel

**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

Ig Fraction conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	FITC	490	525

### Preparation

Purified IgG prepared by affinity chromatography on Protein G

### Buffer Solution

Phosphate buffered saline

<b>Preservative Stabilisers</b>	0.09% Sodium Azide 1% Bovine Serum Albumin
<b>Approx. Protein Concentrations</b>	IgG concentration 0.1 mg/ml
<b>Immunogen</b>	Porcine large granular lymphocytes.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P53714</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">396943</a> ITGB2    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	CD18
<b>RRID</b>	AB_2296305
<b>Fusion Partners</b>	Spleen cells from immunised Balb/c mice were fused with cells of the mouse P3-X63-Ag8.653 myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Pig CD18a, clone PNK-I</b> recognizes porcine CD18a. PNK-I was clustered as CD18a at the Second International Workshop to Define Swine Cluster of Differentiation (CD) Antigens (<a href="#">Saalmuller et al. 1998</a>). 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 <math>\beta</math>2 chain (CD18). PNK-I inhibits porcine NK cell activity independent of any effect on antibody dependent cellular cytotoxicity (<a href="#">Dato and Kim 1990</a>).</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 (<a href="#">Chen et al. 2011</a>).</p>
<b>Flow Cytometry</b>	Use 10ul of the suggested working dilution to label $10^6$ cells in 100ul.
<b>References</b>	<ol style="list-style-type: none"> <li>1. Dato, M.E. &amp; 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. <a href="#">J Immunol. 144 (11): 4452-62.</a></li> <li>2. Haverson, K. et al. (1999) T-cell populations in the pig intestinal lamina propria: memory cells with unusual phenotypic characteristics. <a href="#">Immunology 96: 66-73.</a></li> <li>3. Vanden Bergh, P.G. et al. (2009) Porcine CD18 mediates Actinobacillus pleuropneumoniae ApxIII species-specific toxicity. <a href="#">Vet Res. 40:1-10.</a></li> </ol>

4. Chen, Z.W. *et al.* (2011) Mechanisms underlying *Actinobacillus pleuropneumoniae* exotoxin ApxI induced expression of IL-1 $\beta$ , IL-8 and TNF- $\alpha$  in porcine alveolar macrophages. [Vet Res. 42:25.](#)
5. Vanden Bergh, P.G. *et al.* (2008) Probing of *Actinobacillus pleuropneumoniae* ApxIII toxin-dependent cytotoxicity towards mammalian peripheral blood mononucleated cells. [BMC Res Notes 1:121.](#)
6. 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.](#)

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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** Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light.

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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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10041 available at: <https://www.bio-rad-antibodies.com/SDS/MCA1972F>  
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**Regulatory** For research purposes only

## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:FITC \(MCA928F\)](#)

<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://www.bio-rad-antibodies.com/datasheets)

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