

# 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 <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.		
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</b>	0.09% Sodium Azide
<b>Stabilisers</b>	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 Apxl 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* ApxIIIA 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.](#)

<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>
<b>Storage</b>	<p>Store at +4°C or at -20°C if preferred.</p> <p>This product should be stored undiluted.</p> <p>Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.</p>
<b>Guarantee</b>	12 months from date of despatch
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10041 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA1972F">https://www.bio-rad-antibodies.com/SDS/MCA1972F</a> 10041
<b>Regulatory</b>	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)  
'M366031:200529'

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