

Datasheet: MCA1972PE

Description:	MOUSE ANTI PIG CD18a:RPE
Specificity:	CD18a
Other names:	INTEGRIN BETA 2 CHAIN
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	PNK-I
Isotype:	IgG1
Quantity:	100 TESTS

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	■			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.		
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
Reconstitution	Reconstitute with 1.0 ml distilled water		
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	RPE 488nm laser	496	578
Preparation	Purified IgG prepared by affinity chromatography on Protein G		
Buffer Solution	Phosphate buffered saline		
Preservative	0.09% Sodium Azide		
Stabilisers	1% Bovine Serum Albumin		
	5% Sucrose		
Immunogen	Porcine large granular lymphocytes.		
External Database	UniProt:		

Links [P53714](#) [Related reagents](#)

Entrez Gene:

[396943](#) ITGB2 [Related reagents](#)

Synonyms CD18

RRID AB_2249315

Fusion Partners Spleen cells from immunised Balb/c mice were fused with cells of the mouse P3-X63-Ag8.653 myeloma cell line.

Specificity **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 β 2 chain (CD18). PNK-I inhibits porcine NK cell activity independent of any effect on antibody dependent cellular cytotoxicity ([Dato and Kim 1990](#)).

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.

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](#)).

Flow Cytometry Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.

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. (2009) Porcine CD18 mediates Actinobacillus pleuropneumoniae ApxIII species-specific toxicity. [Vet Res. 40:1-10.](#)
4. 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.](#)
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.](#)

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.

DO NOT FREEZE.

This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee	12 months from date of despatch
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Health And Safety Information	Material Safety Datasheet documentation #10075 available at: 10075: https://www.bio-rad-antibodies.com/uploads/MSDS/10075.pdf
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Regulatory	For research purposes only
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Related Products

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA928PE\)](#)

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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