Datasheet: MCA1749F

BATCH NUMBER 1804

Description:	MOUSE ANTI PIG CD4 ALPHA:FITC
Specificity:	CD4 ALPHA
Other names:	CD4
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	MIL17
Isotype:	IgG2b
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	▪			Neat

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 appropriate negative/positive controls.

Target Species

Pig

Product Form

Purified IgG 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 A from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide
1% Bovine Serum Albumin

Approx. Protein

IgG concentration 0.1mg/ml

Concentrations	
Immunogen	Leucocytes isolated from porcine gut lamina propria.
RRID	AB_323347
Specificity	**Mouse anti Porcine CD4 alpha, clone MIL17** recognizes a ~55 kDa porcine homologue to the human CD4 antigen found on the surface of helper-T cells. MIL-17 was confirmed as a member of the CD4 alpha cluster at the 'Third International Workshop on Swine Leukocyte Differentiation Antigens' (Haverson *et al.* 2001). Porcine CD4 is a type 1 trans-membrane member of the immunoglobulin superfamily. Pigs appear unusual amongst mammalian species as they appear to have four populations of resting T lymphocytes. In addition to the two populations of mutually exclusive CD4+/CD8- and CD4-/CD8+ lymphocytes, they also appear to have significant populations of CD4-/CD8- and CD4+/CD8+ cells. Lymphoblasts with a double positive phenotype have been described in other species but this is not the case for mature T lymphocytic calls (Saalmuller *et al.* 1987) Mouse anti Pig CD4 alpha, clone MIL17 stains a population of cells with characteristic lymphocyte morphology in immunohistochemistry (Inman *et al.* 2010).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.
References	1. Saalmüller A *et al.* (2001) Summary of workshop findings for porcine T-lymphocyte-specific monoclonal antibodies. Vet Immunol Immunopathol. 80 (1-2): 35-52. 2. Castellano, G. *et al.* (2010) Therapeutic targeting of classical and lectin pathways of complement protects from ischemia-reperfusion-induced renal damage. Am J Pathol. 176: 1648-59. 3. Inman, C.F. *et al.* (2010) Dendritic cells interact with CD4 T cells in intestinal mucosa. J Leukoc Biol. 88 (3): 571-8. 4. Kick AR *et al.* (2011) Evaluation of peripheral lymphocytes after weaning and vaccination for *Mycoplasma hyopneumoniae*. Res Vet Sci. 91 (3): e68-72. 5. Kick, A.R. *et al.* (2012) Effects of stress associated with weaning on the adaptive immune system in pigs. J Anim Sci. 90: 649-56. 6. Goujon, J.M. *et al.* (2000) Influence of cold-storage conditions on renal function of autotransplanted large pig kidneys. Kidney Int. 58: 838-50. 7. Tambuyzer BR *et al.* (2012) Osteopontin alters the functional profile of porcine microglia *in vitro*. Cell Biol Int. 36 (12): 1233-8. 8. Tuchscherer, M. *et al.* (2012) Effects of inadequate maternal dietary protein:carbohydrate ratios during pregnancy on offspring immunity in pigs. BMC Vet Res. 8: 232. 9. Cao, D. *et al.* (2010) Synthetic innate defence regulator peptide enhances in vivo immunostimulatory effects of CpG-ODN in newborn piglets. Vaccine. 28: 6006-13. 10. Clapperton, M. *et al.* (2005) Associations of weight gain and food intake with leukocyte sub-sets in Large White pigs Livestock Production Science 96: 249-60 11. Clapperton, M. *et al.* (2005) Innate immune traits differ between Meishan and Large White pigs. Vet Immunol Immunopathol. 104: 131-44.

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following aerosol, intra-nasal and contact infection with pandemic swine influenza A virus, A(H1N1)09. Vet Res. 47 (1): 103.
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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.
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.
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA1749F 10041
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG2b NEGATIVE CONTROL:FITC (MCA691F)

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