Datasheet: MCA874EL

BATCH NUMBER 159923

Description:	MOUSE ANTI HUMAN MACROPHAGES:Low Endotoxin
Specificity:	MACROPHAGES/MONOCYTES/GRANULOCYTES
Format:	Low Endotoxin
Product Type:	Monoclonal Antibody
Clone:	MAC387
Isotype:	IgG1
Quantity:	0.5 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)	▪			1/50 - 1/200
Immunohistology - Frozen	▪			1/100 - 1/200
Immunohistology - Paraffin (2)	▪			1/100 - 1/200
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting			▪	

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.

(1)**Membrane permeabilisation is required for this application. Bio-Rad recommends the use of Leucoperm™ (Product Code BUF09) for this purpose.**

(2)**This product requires protein digestion pre-treatment of paraffin sections e.g. trypsin or pronase.**

Target Species

Human

Species Cross Reactivity

Reacts with: Horse, Pig, Dog, Rabbit, Baboon, Bovine, Guinea Pig, Rat, Cat, Cynomolgus monkey, Rhesus Monkey, Goat, Fallow deer, Pygmy hippopotamus, Mink, Marmoset

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	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	None present
Carrier Free	Yes
Endotoxin Level	<0.01EU/ug
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml
Immunogen	Human monocytes.
External Database Links	**UniProt:** P06702 Related reagents **Entrez Gene:** 6280 S100A9 Related reagents
Synonyms	CAGB, CFAG, MRP14
RRID	AB_1605222
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse NS1 myeloma cell line.
Specificity	**Mouse anti Human macrophages, clone MAC387** recognizes the L1 or Calprotectin molecule, an intracytoplasmic antigen comprised of a 12 kDa alpha chain and a 14 kDa beta chain. Although originally described as binding to epitopes common to both the alpha and beta chains (Flavell *et al.* 1987) subsequent studies indicate that the antibody detects an epitope exclusively expressed on the beta chain (Goebeler *et al.* 1994) demonstrated by immunofluorescent and western blotting on both naturally expressing and transfected targets. In addition Mouse anti Human macrophages, clone MAC387 detects the beta chain in complex with the alpha. The antigen recognized by Mouse anti Human macrophages, clone MAC387 is expressed by granulocytes, monocytes and by tissue macrophages. Variable results have been reported for staining brain macrophages and microglia. The epitope recognized appears to be well conserved and the antibody is routinely used for the detection of myeloid cells in a wide range of species.

Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10^6 cells in 100ul.
Histology Positive Control Tissue	Human Spleen

References

1. Ueland, T. *et al.* (2009) Dickkopf-1 enhances inflammatory interaction between platelets and endothelial cells and shows increased expression in atherosclerosis. Arterioscler Thromb Vasc Biol. 29: 1228-34

2. Brandtzaeg, P. *et al.* (1992) The leucocyte protein L1 (calprotectin): usefulness as an immunohistochemical marker antigen and putative biological function. Histopathology. 21: 191-196.

3. Gutierrez, M. *et al.* (1999) The detection of CD2+, CD4+, CD8+, and WC1+ T lymphocytes, B cells and macrophages in fixed and paraffin embedded bovine tissue using a range of antigen recovery and signal amplification techniques. Vet Immunol Immunopathol. 71 (3-4): 321-34.

4. Ramsay, A.D. *et al.* (1991) Phenotypic analysis of malignant lymphoma in simian immunodeficiency virus infection using anti-human antibodies. J Pathol. 164 (4): 321-8.

5. Christgau, M. *et al.* (1998) Characterization of immunocompetent cells in the diseased canine periodontium. J Histochem Cytochem. 46 (12): 1443-54.

6. Pérez, J. *et al.* (1999) Immunohistochemical study of the inflammatory infiltrate associated with equine squamous cell carcinoma. J Comp Pathol. 121 (4): 385-97.

7. Nanney, L.B. *et al.* (2008) Calreticulin enhances porcine wound repair by diverse biological effects. Am J Pathol. 173: 610-30.

8. Poncelet, L. *et al.* (2008) Detection of antigenic heterogeneity in feline coronavirus nucleocapsid in feline pyogranulomatous meningoencephalitis. Vet Pathol. 45: 140-53.

9. Sethi, R.S. *et al.* (2010) Immunolocalization of pulmonary intravascular macrophages, TLR4, TLR9 and IL-8 in normal and Pasteurella multocida-infected lungs of water buffalo (Bubalus bubalis). J Comp Pathol. 144: 135-44.

10. Sanchez, J. *et al.* (2011) Microscopical and immunological features of tuberculoid granulomata and cavitary pulmonary tuberculosis in naturally infected goats. J Comp Pathol. 145 (2-3): 107-17.

11. Isling, L.K. *et al.* (2010) Pyelonephritis in slaughter pigs and sows: morphological characterization and aspects of pathogenesis and aetiology. Acta Vet Scand. 52: 48.

12. Vranckx, K. *et al.* (2012) Vaccination reduces macrophage infiltration in bronchus-associated lymphoid tissue in pigs infected with a highly virulent Mycoplasma hyopneumoniae strain. BMC Vet Res. 8: 24.

13. Campuzano, O. *et al.* (2012) Arrhythmogenic right ventricular cardiomyopathy: severe structural alterations are associated with inflammation. J Clin Pathol. 65 (12): 1077-83.

14. García-Jiménez, W.L. (2012) Histological and immunohistochemical characterisation of *Mycobacterium bovis* induced granulomas in naturally infected fallow deer (*Dama dama*). Vet Immunol Immunopathol. 149: 66-75.

15. Santana, C.H. *et al.* (2016) Relationship Between the Inflammatory Infiltrate and the Degree of Differentiation of the Canine Cutaneous Cell Carcinoma. Vet Anim Sci. Oct 10 [Epub ahead of print]

16. Masure, D. *et al.* (2013) A Role for Eosinophils in the Intestinal Immunity against Infective *Ascaris suum* Larvae. PLoS Negl Trop Dis. 2013 Mar;7(3): e2138.

17. Tellez, A. *et al.* (2014) Experimental evaluation of efficacy and healing response of everolimus-eluting stents in the familial hypercholesterolemic swine model: a comparative

study of bioabsorbable versus durable polymer stent platforms. Coron Artery Dis. 25 (3): 198-207.
18. Collin, N. *et al.* (2009) Sand fly salivary proteins induce strong cellular immunity in a natural reservoir of visceral leishmaniasis with adverse consequences for *Leishmania.* PLoS Pathog. 5(5):e1000441.
19. McCurdy, P. *et al.* (2014) Acute lymphoblastic leukemia in a pygmy hippopotamus (*Hexaprotodon liberiensis*). J Zoo Wildl Med. 45 (4): 906-10.
20. Marcaccini, A. *et al.* (2008) Pseudorabies virus infection in mink: a host-specific pathogenesis. Vet Immunol Immunopathol. 124 (3-4): 264-73.
21. Romero-Palomo, F. *et al.* (2015) Immunopathologic Changes in the Thymus of Calves Pre-infected with BVDV and Challenged with BHV-1. Transbound Emerg Dis. Aug 25. [Epub ahead of print]
22. Rossi, C.N. *et al.* (2016) *In situ* Cutaneous cellular immune response in dogs naturally infected by visceral leishmaniasis. Rev Inst Med Trop Sao Paulo. 58: .
23. Vrolyk V *et al.* (2016) Lung Inflammation Associated With Clinical Acute Necrotizing Pancreatitis in Dogs. Vet Pathol. May 11. pii: 0300985816646432. [Epub ahead of print]
24. Nelson, M. *et al.* (2014) Comparative experimental subcutaneous glanders and melioidosis in the common marmoset (*Callithrix jacchus*). Int J Exp Pathol. 95 (6): 378-91.
25. Amarilla, S.P. *et al.* (2016) Thymic depletion of lymphocytes is associated with the virulence of PRRSV-1 strains. Vet Microbiol. 188: 47-58.
26. García-Jiménez, W.L. *et al.* (2013) Immunopathology of granulomas produced by *Mycobacterium bovis* in naturally infected wild boar. Vet Immunol Immunopathol. 156 (1-2): 54-63.
27. Pilling, D. *et al.* (2015) The long pentraxin PTX3 promotes fibrocyte differentiation. PLoS One. 10 (3): e0119709.
28. Zhao, L. *et al.* (2020) Reducing macrophage numbers alleviates temporomandibular joint ankylosis. Cell Tissue Res. 379 (3): 521-36.
29. Lai, H.Y. *et al.* (2017) CCAAT/enhancer-binding protein delta promotes intracellular lipid accumulation in M1 macrophages of vascular lesions. Cardiovasc Res. 113 (11): 1376-88.
30. Wacinski, P. *et al.* (2021) Anti-Inflammatory Effect of Very High Dose Local Vessel Wall Statin Administration: Poly(L,L-Lactide) Biodegradable Microspheres with Simvastatin for Drug Delivery System (DDS). Int J Mol Sci. 22 (14)Jul 13 [Epub ahead of print].

Further Reading

1. Burk, J. *et al.* (2013) Equine cellular therapy--from stall to bench to bedside? Cytometry A. 83 (1): 103-13.
2. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. Vet Res. 39: 54.

Storage

Store at -20^{o}C only.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. 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 #10162 available at: https://www.bio-rad-antibodies.com/SDS/MCA874EL 10162
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	HRP
Goat Anti Mouse IgG (STAR76...)	RPE
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 (STAR77...)	HRP
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC, HRP
Rabbit Anti Mouse IgG (STAR13...)	HRP

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:Low Endotoxin (MCA928EL)

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

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets

'M369048:200529'

Printed on 15 Mar 2024