

# Datasheet: MCA874GT BATCH NUMBER 160979

Description:	MOUSE ANTI HUMAN MACROPHAGES
Specificity:	MACROPHAGES/MONOCYTES/GRANULOCYTES
Other names:	CALPROTECTIN
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	MAC387
Isotype:	lgG1
Quantity:	20 µg

## **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 <u>www.bio-</u>rad-antibodies.com/protocols.

	rad-antibodies.com/protoc	<u>cols</u> .			
		Yes	No	Not Determined	Suggested Dilution
	Flow Cytometry (1)	-			1/50 - 1/100
	Immunohistology - Frozen	-			1/100 - 1/200
	Immunohistology - Paraffin (2)	-			1/100 - 1/200
	ELISA			•	
	Immunoprecipitation			•	
	Western Blotting			•	
	Where this antibody has i	not been	tested fo	r use in a particular teo	hnique this does not
a guide only. It is recommended that the user titrates the ar system using appropriate negative/positive controls. (1)Membrane permeabilisation is required for this applie the use of Leucoperm™ (Product Code <u>BUF09</u> ) for this (2)This product requires protein digestion pre-treatmen trypsin or pronase.				d for this application <u>3UF09</u> ) for this purpo	se.
Target Species	Human				
Species Cross Reactivity	Reacts with: Horse, Pig, I monkey, Rhesus Monkey <b>N.B.</b> Antibody reactivity a	, Goat, F	allow dee	r, Pygmy hippopotamu	s, Mink, Marmoset

	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	0.09% Sodium Azide		
Carrier Free	Yes		
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_324644		
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 <i>et al.</i> 1987) subsequent evidence indicates that the antibody detects an epitope exclusively expressed on the beta chain (Goebeler <i>et al.</i> 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 $1 \times 10^6$ cells in 100ul.
Histology Positive Control Tissue	Human Spleen
References	<ol> <li>Ueland, T. <i>et al.</i> (2009) Dickkopf-1 enhances inflammatory interaction between platelets and endothelial cells and shows increased expression in atherosclerosis. <u>Arterioscler Thromb Vasc Biol. 29: 1228-34</u></li> <li>Brandtzaeg, P. <i>et al.</i> (1992) The leucocyte protein L1 (calprotectin): usefulness as an immunohistochemical marker antigen and putative biological function. <u>Histopathology. 21</u>: <u>191-6</u>.</li> <li>Gutierrez, M. <i>et al.</i> (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. <u>Vet Immunol Immunopathol. 71</u> (3-4): 321-34.</li> <li>Ramsay, A.D. <i>et al.</i> (1991) Phenotypic analysis of malignant lymphoma in simian immunodeficiency virus infection using anti-human antibodies. <u>J Pathol. 164</u> (4): 321-8.</li> <li>Christgau, M. <i>et al.</i> (1998) Characterization of immunocompetent cells in the diseased canine periodontium. <u>J Histochem Cvtochem. 46</u> (12): 1443-54.</li> <li>Pérez, J. <i>et al.</i> (1999) Immunohistochemical study of the inflammatory infiltrate associated with equine squamous cell carcinoma. <u>J Comp Pathol. 121</u> (4): 385-97.</li> <li>Nanney, L.B. <i>et al.</i> (2008) Detection of antigenic heterogeneity in feline coronavirus nucleocapsid in feline pyogranulomatous meningoencephalitis. <u>Vet Pathol. 45</u>: 140-53.</li> <li>Sethi, R.S. <i>et al.</i> (2010) Immunolocalization of pulmonary intravascular macrophages, TLR4, TLR9 and IL-8 in normal and Pasteurella multocida-infected lungs of water buffalo (Bubalus bubals). <u>J Comp Pathol. 144</u>: 135-44.</li> <li>Sanchez, J. <i>et al.</i> (2011) Microscopical and immunological features of tuberculoid granulomata and cavitary pulmonary tuberculosis in naturally infected goats. <u>J Comp Pathol. 145</u> (2-3): 107-17.</li> <li>Insling, L.K. <i>et al.</i> (2012) Vaccination reduces macrophage infiltration in bronchus- associated lymphoid tissue in pigs infected with a highly virulent Mycoplas</li></ol>

study of bioabsorbable versus durable polymer stent platforms. <u>Coron Artery Dis. 25 (3):</u> 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*. <u>PLoS Pathog. 5(5):e1000441</u>.

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. <u>Vet Immunol Immunopathol. 124 (3-4): 264-73.</u>

21. Romero-Palomo, F. *et al.* (2015) Immunopathologic Changes in the Thymus of Calves Pre-infected with BVDV and Challenged with BHV-1. <u>Transbound Emerg Dis. Aug 25.</u> [Epub ahead of print]

22. Rossi, C.N. *et al.* (2016) *In situ* Cutaneous cellular immune response in dogs naturally infected by visceral leishmaniasis. <u>Rev Inst Med Trop Sao Paulo. 58:</u>.

23. Vrolyk V *et al.* (2016) Lung Inflammation Associated With Clinical Acute Necrotizing Pancreatitis in Dogs. <u>Vet Pathol. May 11. pii: 0300985816646432. [Epub ahead of print]</u>

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. <u>Vet Immunol Immunopathol. 156</u> (1-2): 54-63.

27. Pilling, D. *et al.* (2015) The long pentraxin PTX3 promotes fibrocyte differentiation. <u>PLoS One. 10 (3): e0119709.</u>

28. Zhao, L. *et al.* (2020) Reducing macrophage numbers alleviates temporomandibular joint ankylosis. <u>Cell Tissue Res. 379 (3): 521-36.</u>

29. Lai, H.Y. *et al.* (2017) CCAAT/enhancer-binding protein delta promotes intracellular lipid accumulation in M1 macrophages of vascular lesions. <u>Cardiovasc Res. 113 (11):</u> <u>1376-88.</u>

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].

31. Edwards, J.H. *et al.* (2021) Integration and functional performance of a decellularised porcine superflexor tendon graft in an ovine model of anterior cruciate ligament reconstruction. <u>Biomaterials. 279: 121204.</u>

32. Bertolo, P.H.L. *et al.* (2022) Influence of serum progesterone levels on the inflammatory response of female dogs with visceral leishmaniosis. <u>Vet Parasitol. 302:</u> <u>109658.</u>

33. do Prado Duzanski, A. *et al.* (2022) Cell-mediated immunity and expression of MHC class I and class II molecules in dogs naturally infected by canine transmissible venereal tumor: Is there complete spontaneous regression outside the experimental CTVT? Research in Veterinary Science. 145: 193-204.

 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	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.				
	Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.				
Guarantee	12 months from date of despatch				
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA874GT 10040				
Regulatory	For research purposes only				

### **Related Products**

#### **Recommended Secondary Antibodies**

Rabbit Anti Mouse IgG (STAR12)	RPE		
Goat Anti Mouse IgG IgA IgM (STAR87) <u>HRP</u>			
Goat Anti Mouse IgG (STAR76)	RPE		
Goat Anti Mouse IgG (STAR70)	<u>FITC</u>		
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		
Decomposed and Newstine Controls			

**Recommended Negative Controls** 

MOUSE IgG1 NEGATIVE CONTROL (MCA928)

North & South	Tel: +1 800 265 7376	Worldwide	Tel: +44 (0)1865 852 700	Europe	Tel: +49 (0) 89 8090 95 21
America	Fax: +1 919 878 3751		Fax: +44 (0)1865 852 739		Fax: +49 (0) 89 8090 95 50
	Email: antibody_sales_us@bio-ra	ad.com	Email: antibody_sales_uk@bio-r	ad.com	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 'M394965:220223'

#### Printed on 15 Mar 2024

© 2024 Bio-Rad Laboratories Inc | Legal | Imprint