

## Datasheet: MCA874EL BATCH NUMBER 148221

Description:	MOUSE ANTI HUMAN MACROPHAGES:Low Endotoxin
Specificity:	MACROPHAGES/MONOCYTES/GRANULOCYTES
Format:	Low Endotoxin
Product Type:	Monoclonal Antibody
Clone:	MAC387
lsotype:	lgG1
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 ı	recommer	ndations, please visit <u>v</u>	<u>/ww.bio-</u>	
	rad-antibodies.com/proto	<u>cols</u> .				
		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 <sup>™</sup> (Product Code <u>BUF09</u> ) 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 <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	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: <u>P06702</u> <u>Related reagents</u> Entrez Gene: <u>6280</u> S100A9 <u>Related reagents</u>
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 <i>et al.</i> 1987) subsequent studies indicate 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.
	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.

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) 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	Flow Cytometry	Use 10ul of the suggested working dilution to label $1 \times 10^6$ cells in 100ul.
<ul> <li>and endothelial cells and shows increased expression in atherosclerosis. <u>Arterioscler Thromb Vasc Biol. 29: 1228-34</u></li> <li>2. 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: 191-196.</u></li> <li>3. 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 (3-4): 321-34.</u></li> <li>4. Ramsay, A.D. <i>et al.</i> (1999) Phenotypic analysis of malignant lymphoma in simian immunodeficiency virus infection using anti-human antibodies. <u>J Pathol. 164 (4): 321-8.</u></li> <li>5. Christgau, M. <i>et al.</i> (1999) Immunohistochemical study of the inflammatory infiltrate associated with equine squamous cell carcinoma. <u>J Comp Pathol. 121 (4): 385-97.</u></li> <li>7. Nanney, L.B. <i>et al.</i> (2008) Calreticulin enhances porcine wound repair by diverse biological effects. <u>Am J Pathol. 173: 610-30.</u></li> <li>8. Poncelet, L. <i>et al.</i> (2008) Detection of antigenic heterogeneity in feline coronavirus nucleocapsid in feline pyogranulomatous meningoencephalitis. <u>Vet Pathol. 45: 140-53.</u></li> </ul>		Human Spleen
<ul> <li>TLR4, TLR9 and IL-8 in normal and Pasteurella multocida-infected lungs of water buffalo (Bubalus bubalis). J Comp Pathol. 144: 135-44.</li> <li>10. Sanchez, J. <i>et al.</i> (2011) Microscopical and immunological features of tuberculoid granulomata and cavitary pulmonary tuberculosis in naturally infected goats. J Comp Pathol. 145 (2-3): 107-17.</li> <li>11. Isling, L.K. <i>et al.</i> (2010) Pyelonephritis in slaughter pigs and sows: morphological characterization and aspects of pathogenesis and aetiology. Acta Vet Scand. 52: 48.</li> <li>12. Vranckx, K. <i>et al.</i> (2012) Vaccination reduces macrophage infiltration in bronchusassociated lymphoid tissue in pigs infected with a highly virulent Mycoplasma hyopneumoniae strain. BMC Vet Res. 8: 24.</li> <li>13. Campuzano, O. <i>et al.</i> (2012) Arrhythmogenic right ventricular cardiomyopathy: severe structural alterations are associated with inflammation. J Clin Pathol. 65 (12): 1077-83.</li> <li>14. García-Jiménez, W.L. (2012) Histological and immunohistochemical characterisation of <i>Mycobacterium bovis</i> induced granulomas in naturally infected fallow deer (<i>Dama dama</i>). Vet Immunol Immunopathol. 149: 66-75.</li> <li>15. Santana, C.H. <i>et al.</i> (2013) A Role for Eosinophils in the Inflammatory Infiltrate and the Degree of Differentiation of the Canine Cutaneous Cell Carcinoma. Vet Anim Sci. Oct 10 [Epub ahead of print]</li> <li>16. Masure, D. <i>et al.</i> (2013) A Role for Eosinophils in the Intestinal Immunity against Infective Ascaris suum Larvae. PLoS Negl Trop Dis. 2013 Mar;7(3): e2138.</li> <li>17. Tellez, A. <i>et al.</i> (2014) Experimental evaluation of efficacy and healing response of everolimus-eluting stents in the familial hypercholesterolemic swine model: a comparative</li> </ul>		<ul> <li>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: 191-196</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 (3-4): 321-34</u>.</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 (4): 321-8</u>, 5. Christgau, M. <i>et al.</i> (1998) Characterization of immunocompetent cells in the diseased canine periodontium. <u>J. Histochem Cytochem. 46 (12): 1443-54</u>.</li> <li>Perez, J. <i>et al.</i> (2008) Calreticulin enhances porcine wound repair by diverse biological effects. <u>Am J Pathol. 173: 610-30</u>.</li> <li>Poncelet, L. <i>et al.</i> (2008) Detection of antigenic heterogeneity in feline coronavirus nucleocapsid in feline pyogranulomatous meningoencephalitis. <u>Vet Pathol. 45: 140-53</u>.</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 bufflao (Bubalus bubalis). <u>J. Comp Pathol. 144: 135-44</u>.</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 (2-3)</u>.</li> <li>Yranckx, K. <i>et al.</i> (2012) Vaccination reduces macrophage infiltration in bronchusassociated lymphoid tissue in pigs infected with a highly virulent Mycoplasma hyopneumoniae strain. <u>BMC Vet Res. 8: 24</u>.</li> <li>Campuzano, O. <i>et al.</i> (2012) Arkythmogenic right ventricular cardiomyopathy: severe structural alterations are associated w</li></ul>

	study of bioabsorbable versus durable polymer stent platforms. <u>Coron Artery Dis. 25 (3)</u> :
	<u>198-207.</u>
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	natural reservoir of visceral leishmaniasis with adverse consequences for <i>Leishmania</i> .
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	(Hexaprotodon liberiensis). J Zoo Wildl Med. 45 (4): 906-10.
	20. Marcaccini, A. <i>et al.</i> (2008) Pseudorabies virus infection in mink: a host-specific
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	infected by visceral leishmaniasis. Rev Inst Med Trop Sao Paulo. 58: .
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	Pancreatitis in Dogs. Vet Pathol. May 11. pii: 0300985816646432. [Epub ahead of print]
	24. Nelson, M. et al. (2014) Comparative experimental subcutaneous glanders and
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	virulence of PRRSV-1 strains. Vet Microbiol. 188: 47-58.
	26. García-Jiménez, W.L. et al. (2013) Immunopathology of granulomas produced by
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	<u>(1-2): 54-63.</u>
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	PLoS One. 10 (3): e0119709.
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	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. <i>et al.</i> (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 therapyfrom stall to bench to bedside? Cytometry
	<u>A. 83 (1): 103-13.</u>
	2. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update.
	<u>Vet Res. 39: 54.</u>
Storage	Store at -20°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	) <u>HRP</u>
Goat Anti Mouse IgG (STAR76)	RPE
Goat Anti Mouse IgG (STAR70)	<u>FITC</u>
Goat Anti Mouse IgG (H/L) (STAR117)	<u>Alk. Phos., DyLight®488, DyLight®550,</u>
	DyLight®650, DyLight®680, DyLight®800,
	<u>FITC, HRP</u>
Rabbit Anti Mouse IgG (STAR9)	<u>FITC</u>
Goat Anti Mouse IgG (STAR77)	HRP
Goat Anti Mouse IgG (Fc) (STAR120)	FITC, HRP
Rabbit Anti Mouse IgG (STAR13)	HRP
<b>Recommended Negative Controls</b>	

#### MOUSE IgG1 NEGATIVE CONTROL:Low Endotoxin (MCA928EL)

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-r	ad.com	Email: antibody_sales_uk@bio	-rad.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 'M369048:200529'

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