Datasheet: MCA771PEB

BATCH NUMBER 0514

Description:	RAT ANTI MOUSE Ly-6B.2 ALLOANTIGEN:RPE
Specificity:	Ly-6B.2 ALLOANTIGEN
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	7/4
Isotype:	IgG2a
Quantity:	500 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 - 1/10

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 their own system using appropriate negative/positive controls.

Target Species

Mouse

Product Form

Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized

Reconstitution

Reconstitute with 5.0ml 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 from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide
1% Bovine Serum Albumin
5% Sucrose

Immunogen	Cultured bone marrow cells
RRID	AB_567163
Fusion Partners	Spleen cells from AO rats were fused with cells from the Y3 Ag1.2.3 rat myeloma cell line.
Specificity	**Rat anti Mouse Ly-6B.2 monoclonal antibody, clone 7/4** recognizes the Ly-6B.2 antigen. Ly-6B.2 is a ~25-30 kDa GPI-anchored, heavily glycosylated protein expressed on neutrophils, inflammatory monocytes and some activated macrophages (Rosas *et al.* 2010). High levels of expression are seen in bone marrow, spleen, lung and lymph nodes. N-glycanase treatment of thioglycollate elicited peritoneal neutrophil lysates lowers the apparent molecular weight of Ly-6B.2 to ~15 kDa (Rosas *et al.*2010). In common with other Ly-6 antigens Ly-6B.2 demonstrates a polymorphic expression on inbred mouse strains (Kimura *et al.* 1984). Rat anti mouse Ly-6B.2, clone 7/4 recognizes the Ly-6B.2 antigen in 129J; AKR; C57BL/6; C57BL/10; C58; DBA/2; NZB; NZW; SJL; MFI; Swiss (PO) Strains whilst A2G; A/Sn; ASW; BALB/c; C3H/HEH: CBA.T6T6 are negative or demonstrate very weak reactivity (Hirsch and Gordon 1982). Rat anti mouse Ly-6B.2 has been successfully used for the immunomagnetic depletion of neutrophils during the enrichment of primitive hematopoietic cells from bone marrow (Bertoncello *et al.* 1991) and the depletion of myeloid cells *in vivo* (Rosas *et al.* 2010).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.
References	1. Rosas, M. *et al.* (2010) The myeloid 7/4-antigen defines recently generated inflammatory macrophages and is synonymous with Ly-6B. J Leukoc Biol. 88 (1): 169-80. 2. Gordon, S. *et al.* (1992) Antigen markers of macrophage differentiation in murine tissues. Curr Top Microbiol Immunol. 181: 1-37. 3. Word, R.A. *et al.* (2005) Transgene insertion on mouse chromosome 6 impairs function of the uterine cervix and causes failure of parturition. Biol Reprod. 73 (5): 1046-56. 4. Locke, L.W. (2009) A novel neutrophil-specific PET imaging agent: cFLFLFK-PEG-64Cu. J Nucl Med. 50: 790-7. 5. Allam, R. *et al.* (2011) Cyclic Polypeptide and Aminoglycoside Antibiotics Trigger IL-1{beta} Secretion by Activating the NLRP3 Inflammasome. J Immunol. 186: 2714-8. 6. Holt, R. *et al.* (2011) The Molecular Mechanisms of Cervical Ripening Differ between Term and Preterm Birth. Endocrinology. 152: 1036-46. 7. Frossard, J.L. *et al.* (2011) Role of CCL-2, CCR-2 and CCR-4 in cerulein-induced acute pancreatitis and pancreatitis-associated lung injury. J Clin Pathol. 64: 387-93. 8. McDonald, J.U. *et al.* (2011) *In vivo* functional analysis and genetic modification of in vitro-derived mouse neutrophils. FASEB J. 25: 1972-82. 9. Larmonier, C.B. *et al.* (2011) NHE3 modulates the severity of colitis in IL-10-deficient mice. Am J Physiol Gastrointest Liver Physiol. 300: G998-G1009. 10. Yellon, S.M. *et al.* (2011) Remodeling of the cervix and parturition in mice lacking the progesterone receptor B isoform. Biol Reprod. 85: 498-502. 11. Nadeau, S. *et al.* (2011) Functional Recovery after Peripheral Nerve Injury is Dependent on the Pro-Inflammatory Cytokines IL-1{beta} and TNF: Implications for

Neuropathic Pain. J Neurosci. 31: 12533-12542.
12. Bombardelli, L. *et al.* (2010) Pancreas-specific ablation of beta1 integrin induces tissue degeneration by disrupting acinar cell polarity. Gastroenterology. 138: 2531-40,
13. Guerriero, J.L. *et al.* (2011) DNA alkylating therapy induces tumor regression through an HMGB1-mediated activation of innate immunity. J Immunol. 186: 3517-26.
14. Brulhart-Meynet, M.C. *et al.* (2015) Improving Reconstituted HDL Composition for Efficient Post-Ischemic Reduction of Ischemia Reperfusion Injury. PLoS One. 10 (3): e0119664.
15. Patel, J. *et al.* (2015) RGS1 regulates myeloid cell accumulation in atherosclerosis and aortic aneurysm rupture through altered chemokine signalling. Nat Commun. 6: 6614.
16. Hamers, A.A. *et al.* (2015) Deficiency of Nuclear Receptor Nur77 Aggravates Mouse Experimental Colitis by Increased NFκB Activity in Macrophages. PLoS One. 10 (8): e0133598.
17. Ao, M. *et al.* (2015) Dental Infection of *Porphyromonas gingivalis* Induces Preterm Birth in Mice. PLoS One. 10 (8): e0137249.
18. Cnops, J. *et al.* (2015) NK-, NKT- and CD8-Derived IFNγ Drives Myeloid Cell Activation and Erythrophagocytosis, Resulting in Trypanosomosis-Associated Acute Anemia. PLoS Pathog. 11 (6): e1004964.
19. Cardenas, H. *et al.* (2016) Dietary Apigenin Exerts Immune-Regulatory Activity in Vivo by Reducing NF-κB Activity, Halting Leukocyte Infiltration and Restoring Normal Metabolic Function. Int J Mol Sci. 17 (3). pii: E323. doi: 10.3390/ijms17030323.
20. Park, S.W. *et al.* (2009) Human activated protein C attenuates both hepatic and renal injury caused by hepatic ischemia and reperfusion injury in mice. Kidney Int. 76 (7): 739-50.
21. Boal, F. *et al.* (2016) PI5P Triggers ICAM-1 Degradation in *Shigella* Infected Cells, Thus Dampening Immune Cell Recruitment. Cell Rep. 14 (4): 750-9.
22. Nguyen, H.T. & Shen, H. (2016) The effect of PEGylation on the stimulation of IL-1β by gold (Au) nanoshell/silica core nanoparticles. J Mater Chem B Mater Biol Med. 4 (9): 1650-1659.
23. Choi, E. *et al.* (2015) Expression of Activated Ras in Gastric Chief Cells of Mice Leads to the Full Spectrum of Metaplastic Lineage Transitions. Gastroenterology. Dec 8. pii: S0016-5085(15)01735-7. [Epub ahead of print]
24. Zhao, Y. *et al.* (2016) Rapamycin prevents bronchiolitis obliterans through increasing infiltration of regulatory B cells in a murine tracheal transplantation model. J Thorac Cardiovasc Surg. 151 (2): 487-496.e3.
25. Wan, W. *et al.* (2015) Atypical chemokine receptor 1 deficiency reduces atherogenesis in ApoE-knockout mice. Cardiovasc Res. 106 (3): 478-87.
26. Kidoya, H. *et al.* (2015) APJ Regulates Parallel Alignment of Arteries and Veins in the Skin. Dev Cell. 33 (3): 247-59.
27. Wieser, V. *et al.* (2016) Lipocalin 2 drives neutrophilic inflammation in alcoholic liver disease. J Hepatol. 64 (4): 872-80.
28. Kjellman, P. *et al.* (2015) Size-dependent lymphatic uptake of nanoscale-tailored particles as tumor mass increases Future Science OA. 1: (4)
29. Brennan, F.H. *et al.* (2015) The Complement Receptor C5aR Controls Acute Inflammation and Astrogliosis following Spinal Cord Injury. J Neurosci. 35 (16): 6517-31.
30. Farrar, C.A. *et al.* (2016) Collectin-11 detects stress-induced L-fucose pattern to trigger renal epithelial injury. J Clin Invest. Apr 18. pii: 83000. [Epub ahead of print]

31. Laubitz, D. *et al.* (2016) Reduced Epithelial Na+/H+ Exchange Drives Gut Microbial Dysbiosis and Promotes Inflammatory Response in T Cell-Mediated Murine Colitis. PLoS One. 11 (4): e0152044.
32. Rabadi, M.M. *et al.* (2016) Peptidyl arginine deiminase-4 deficient mice are protected against kidney and liver injury after renal ischemia and reperfusion. Am J Physiol Renal Physiol. Jun 22: ajprenal.00254.2016. [Epub ahead of print]
33. Morris, A. H. *et al.* (2016) Inadequate Processing of Decellularized Dermal Matrix Reduces Cell Viability *In Vitro* and Increases Apoptosis and Acute Inflammation *In Vivo*. BioResearch Open Access. 5 (1): 177-87.
34. Ni, H.M. *et al.* (2016) Caspase Inhibition Prevents Tumor Necrosis Factor-α-Induced Apoptosis and Promotes Necrotic Cell Death in Mouse Hepatocytes *in Vivo* and *in Vitro*. Am J Pathol. Sep 7. pii: S0002-9440(16)30236-X. [Epub ahead of print]
35. Wang, S. *et al.* (2016) Increased hepatic receptor interacting protein kinase 3 expression due to impaired proteasomal functions contributes to alcohol-induced steatosis and liver injury. Oncotarget. 7 (14): 17681-98.
36. Konrad, F.M. *et al.* (2019) How Adhesion Molecule Patterns Change While Neutrophils Traffic through the Lung during Inflammation. Mediators Inflamm. 2019: 1208086.
37. Jung, P.E. *et al.* (2020) Honokiol Protects the Kidney from Renal Ischemia and Reperfusion Injury by Upregulating the Glutathione Biosynthetic Enzymes. Biomedicines. 8 (9): 352.
38. Chatterjee, S. *et al.* (2013) Junctional adhesion molecule-A regulates vascular endothelial growth factor receptor-2 signaling-dependent mouse corneal wound healing. PLoS One. 8 (5): e63674.
39. Han, Y. *et al.* (2020) Close Homolog of L1 Deficiency Exacerbated Intestinal Epithelial Barrier Function in Mouse Model of Dextran Sulfate Sodium-Induced Colitis. Front Physiol. 11: 584508.
40. Leinweber, J. *et al.* (2021) Elastase inhibitor agaphelin protects from acute ischemic stroke in mice by reducing thrombosis, blood-brain barrier damage, and inflammation. Brain Behav Immun. S0889-1591(20)32485-5.
41. Tilstra, J.S. *et al.* (2020) B cell-intrinsic TLR9 expression is protective in murine lupus. J Clin Invest. 130 (6): 3172-3187.

Storage	Prior to reconstitution store at +4°C. Following reconstitution 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
Health And Safety Information	Material Safety Datasheet documentation #20487 available at: https://www.bio-rad-antibodies.com/SDS/MCA771PEB 20487
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

RAT IgG2a NEGATIVE CONTROL:RPE (MCA1212PE)

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

'M375666:210104'

Printed on 08 Apr 2024