Datasheet: MCA43A647 BATCH NUMBER 167532

Description:	MOUSE ANTI RAT CD45:Alexa Fluor® 647
Specificity:	CD45
Other names:	LCA
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	OX-1
Isotype:	lgG1
Quantity:	100 TESTS/1ml

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-rad-antibodies.com/protocols</u> .					
		Yes	No	Not Determined	Suggested Dilution	
	Flow Cytometry	•			Neat - 1/5	
	Where this antibody has necessarily exclude its u a guide only. It is recom system using appropriat	use in such mended tha	procedur at the use	es. Suggested workin r titrates the antibody	g dilutions are given as	
Target Species	Rat					
Product Form	Purified IgG conjugated	to Alexa Flu	uor® 647	- liquid		
Max Ex/Em	Fluorophore	Excitation M	ax (nm)	Emission Max (nm)		
	Alexa Fluor®647	650		665		
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 0.05 mg/ml					

Concentrations

Immunogen	Rat thymocyte membrane glycoproteins.
External Database Links	UniProt: P04157 Related reagents Entrez Gene: 24699 Ptprc Related reagents
RRID	AB_321197
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the NS1 mouse myeloma cell line.
Specificity	 Mouse anti Rat CD45 antibody, clone OX-1 recognizes CD45, also known as the leucocyte common antigen (LCA). The leucocyte common antigen consists of a family of heavily glycosylated membrane glycoproteins of molecular weight 180 – 240kDa. Antibodies recognising a common epitope on all of these isoforms are termed CD45, whilst those recognising only individual isoforms are termed CD45RA, CD45RO etc. OX-1 reacts with all forms of CD45 expressed by all haematopoietic cells, except erythrocytes. CD45 isoforms play complex roles in T-cell and B-cell antigen receptor signal transduction. This product is routinely tested in flow cytometry on rat splenocytes
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	 Standring, R. <i>et al.</i> (1978) The predominant heavily glycosylated glycoproteins at the surface of rat lymphoid cells are differentiation antigens. <u>Eur J Immunol. 8 (12): 832-9</u>. Sunderland, C.A. <i>et al.</i> (1979) Purification with monoclonal antibody of a predominant leukocyte-common antigen and glycoprotein from rat thymocytes. <u>Eur J Immunol. 9 (2): 155-9</u>. Woollett, G.R. <i>et al.</i> (1985) Molecular and antigenic heterogeneity of the rat leukocyte-common antigen from thymocytes and T and B lymphocytes. <u>Eur J Immunol. 15 (2): 168-73</u>. Martín, A. <i>et al.</i> (1995) Passive dual immunization against tumour necrosis factor-alpha (TNF-alpha) and IL-1 beta maximally ameliorates acute aminonucleoside nephrosis. <u>Clin Exp Immunol. 99 (2): 283-8</u>. Giezeman-Smits, K.M. <i>et al.</i> (1999) The regulatory role of CD45 on rat NK cells in target cell lysis. <u>J Immunol. 163 (1): 71-6</u>. Murakami, K. <i>et al.</i> (2000) Regulation of mast cell signaling through high-affinity IgE receptor by CD45 protein tyrosine phosphatase. <u>Int Immunol. 12 (2): 169-76</u>. Ermert, L. <i>et al.</i> (2001) Comparison of different detection methods in quantitative microdensitometry. <u>Am J Pathol. 158: 407-17</u>.

8. Dick, A.D. *et al.* (2001) Distribution of OX2 antigen and OX2 receptor within retina. <u>Invest Ophthalmol Vis Sci. 42: 170-6.</u>

9. Sato, K. *et al.* (2001) Carbon monoxide generated by heme oxygenase-1 suppresses the rejection of mouse-to-rat cardiac transplants. <u>J Immunol. 166 (6): 4185-94.</u>

10. Kurozumi, K. *et al.* (2007) Effect of tumor microenvironment modulation on the efficacy of oncolytic virus therapy. <u>J Natl Cancer Inst. 99: 1768-81.</u>

11. Leonardo, C.C. *et al.* (2009) Inhibition of gelatinase activity reduces neural injury in an ex vivo model of hypoxia-ischemia. <u>Neuroscience. 160: 755-66.</u>

12. Vaschetto, R. *et al.* (2010) Renal hypoperfusion and impaired endothelium-dependent vasodilation in an animal model of VILI: the role of the peroxynitrite-PARP pathway <u>Crit</u> <u>Care. 14: R45.</u>

13. Ladhoff, J. *et al.* (2010) Immune privilege of endothelial cells differentiated from endothelial progenitor cells. <u>Cardiovasc Res. 88: 121-9.</u>

14. Jeong, H.K. *et al* (2010) Inflammatory responses are not sufficient to cause delayed neuronal death in ATP-induced acute brain injury. <u>PLoS One. 5: e13756.</u>

15. Schupp, N. *et al.* (2011) Mineralocorticoid receptor-mediated DNA damage in kidneys of DOCA-salt hypertensive rats. <u>FASEB J. 25 (3): 968-78.</u>

16. Markusic, D.M. *et al.* (2010) Separating lentiviral vector injection and induction of gene expression in time, does not prevent an immune response to rtTA in rats. <u>PLoS One. 5: e9974.</u>

17. Runesson, E. *et al.* (2015) Nucleostemin- and Oct 3/4-positive stem/progenitor cells exhibit disparate anatomical and temporal expression during rat Achilles tendon healing. <u>BMC Musculoskelet Disord. 16: 212.</u>

18. Tanner, D.C. *et al.* (2015) cFLIP is critical for oligodendrocyte protection from inflammation. <u>Cell Death Differ. 22 (9): 1489-501.</u>

Wang, C. *et al.* (2015) Small activating RNA induces myogenic differentiation of rat adipose-derived stem cells by upregulating MyoD. <u>Int Braz J Urol. 41 (4): 764-72.</u>
 Yao, Y. *et al.* (2016) Alendronate Attenuates Spinal Microglial Activation and Neuropathic Pain. J Pain. 17 (8): 889-903.

21. Collins, J.J.P. *et al.* (2018) Impaired Angiogenic Supportive Capacity and Altered Gene Expression Profile of Resident CD146⁺ Mesenchymal Stromal Cells Isolated from Hyperoxia-Injured Neonatal Rat Lungs. <u>Stem Cells Dev. 27 (16): 1109-24.</u>

22. Porwal, K. *et al.* (2019) Increased bone marrow-specific adipogenesis by clofazimine causes impaired fracture healing, osteopenia and osteonecrosis without extra-skeletal effects in rats. <u>Toxicol Sci. kfz172.</u>

23. Hellenbrand, D.J. *et al.* (2019) Sustained interleukin-10 delivery reduces inflammation and improves motor function after spinal cord injury. <u>J Neuroinflammation. 16 (1): 93.</u>

24. Kuriyama, T. *et al.* (2020) A novel rat model of inflammatory bowel disease developed using a device created with a 3D printer. <u>Regen Ther. 14: 1-10.</u>

25. Pilipović, I. *et al.* (2020) Propranolol diminished severity of rat EAE by enhancing immunoregulatory/protective properties of spinal cord microglia. <u>Neurobiol Dis. 134:</u> 104665.

26. Dabrowska, S. *et al.* (2021) Neuroinflammation evoked by brain injury in a rat model of lacunar infarct. <u>Exp Neurol. 336: 113531.</u>

27. Elabi, O.F. *et al.* (2021) L-dopa-Dependent Effects of GLP-1R Agonists on the Survival of Dopaminergic Cells Transplanted into a Rat Model of Parkinson Disease. <u>Int J Mol Sci.</u> 22(22):12346.

Guarantee	Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.
Guarantee	12 months from date of despatch
Guarantee	12 months from date of despatch
Acknowledgements	This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchase product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening
	services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or outlicensing@thermofisher.com
Health And Safety Information	or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:Alexa Fluor® 647 (MCA1209A647)

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-rac	l.com	Email: antibody_sales_uk@bio-rac	d.com	Email: antibody_sales_de@bio-rad.com

Printed on 05 Feb 2024

© 2024 Bio-Rad Laboratories Inc | Legal | Imprint