

Datasheet: MCA43P750

Description:	MOUSE ANTI RAT CD45:RPE-Alexa Fluor® 750		
Specificity:	CD45		
Other names:	LCA		
Format:	RPE-ALEXA FLUOR® 750		
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 www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	-			

Where this product 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 product for use in their own system using appropriate negative/positive controls.

Target Species	Rat					
Product Form	Purified IgG conjugated to R. Phycoerythrin (RPE) - Alexa Fluor® 750 - I					
Reconstitution	Reconstitute with 1.0	ml distilled water				
Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)			
	RPE-Alexa Fluor®750 488nm laser	496	779			
	RPE-Alexa Fluor®750 561nm laser	546	779	_		
Preparation	Purified IgG prepared supernatant.	by affinity chromatog	raphy on Protein G fi	rom tissue culture		
Buffer Solution	Phosphate buffered s	aline				

Preservative Stabilisers 0.09% Sodium Azide (NaN₃)1% Bovine Serum Albumin

5% Sucrose

Immunogen

Rat thymocyte membrane glycoproteins.

External Database Links

UniProt:

P04157 Related reagents

Entrez Gene:

24699 Ptprc Related reagents

RRID

AB_10673436

Fusion Partners

Spleen cells from immunised 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 10⁶ cells in 100ul.

References

- 1. Sunderland, C.A. *et al.* (1979) Purification with monoclonal antibody of a predominant leukocyte-common antigen and glycoprotein from rat thymocytes. <u>Eur J Immunol. 9 (2):</u> 155-9.
- 2. Woollett, G.R. *et al.* (1985) Molecular and antigenic heterogeneity of the rat leukocyte-common antigen from thymocytes and T and B lymphocytes. <u>Eur J Immunol. 15 (2):</u> 168-73.
- 3. Martín, A. *et al.* (1995) Passive dual immunization against tumour necrosis factor-alpha (TNF-alpha) and IL-1 beta maximally ameliorates acute aminonucleoside nephrosis. <u>Clin Exp Immunol.</u> 99 (2): 283-8.
- 4. Sato, K. *et al.* (2001) Carbon monoxide generated by heme oxygenase-1 suppresses the rejection of mouse-to-rat cardiac transplants. J Immunol. 166 (6): 4185-94.
- 5. Murakami, K. *et al.* (2000) Regulation of mast cell signaling through high-affinity IgE receptor by CD45 protein tyrosine phosphatase. <u>Int Immunol. 12 (2): 169-76.</u>
- 6. Standring, R. *et al.* (1978) The predominant heavily glycosylated glycoproteins at the surface of rat lymphoid cells are differentiation antigens. Eur J Immunol. 8 (12): 832-9.

- 7. Giezeman-Smits, K.M. *et al.* (1999) The regulatory role of CD45 on rat NK cells in target cell lysis. J Immunol. 163 (1): 71-6.
- 8. Zilka, N. *et al.* (2009) Human misfolded truncated tau protein promotes activation of microglia and leukocyte infiltration in the transgenic rat model of tauopathy. <u>J</u> Neuroimmunol. 209 (1-2): 16-25.
- 9. 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>
- 10. Ermert, L. *et al.* (2001) Comparison of different detection methods in quantitative microdensitometry. <u>Am J Pathol. 158: 407-17.</u>
- 11. Jeong, H.K. *et al* (2010) Inflammatory responses are not sufficient to cause delayed neuronal death in ATP-induced acute brain injury. PLoS One. 5: e13756.
- 12. Leonardo, C.C. *et al.* (2009) Inhibition of gelatinase activity reduces neural injury in an ex vivo model of hypoxia-ischemia. <u>Neuroscience</u>. 160: 755-66.
- 13. 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:</u> e9974.
- 14. 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> Care. 14: R45.
- 15. Ladhoff, J. *et al.* (2010) Immune privilege of endothelial cells differentiated from endothelial progenitor cells. <u>Cardiovasc Res. 88: 121-9.</u>
- 16. Yao, Y. *et al.* (2016) Alendronate Attenuates Spinal Microglial Activation and Neuropathic Pain. J Pain. 17 (8): 889-903.
- 17. Wang, C. *et al.* (2015) Small activating RNA induces myogenic differentiation of rat adipose-derived stem cells by upregulating MyoD. Int Braz J Urol. 41 (4): 764-72.
- 18. Tanner, D.C. *et al.* (2015) cFLIP is critical for oligodendrocyte protection from inflammation. Cell Death Differ. 22 (9): 1489-501.
- 19. 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>
- 20. Hellenbrand, D.J. *et al.* (2019) Sustained interleukin-10 delivery reduces inflammation and improves motor function after spinal cord injury. J Neuroinflammation. 16 (1): 93.
- 21. Pilipović, I. *et al.* (2019) Propranolol diminished severity of rat EAE by enhancing immunoregulatory/protective properties of spinal cord microglia. <u>Neurobiol Dis. Nov 2</u> [<u>Epub ahead of print</u>].
- 22. 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>
- 23. 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>
- 24. Dabrowska, S. *et al.* (2021) Neuroinflammation evoked by brain injury in a rat model of lacunar infarct. Exp Neurol. 336: 113531.

Storage

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
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Health And Safety Information	Material Safety Datasheet documentation #20487 available at: 20487: https://www.bio-rad-antibodies.com/uploads/MSDS/20487.pdf
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:RPE-Alexa Fluor® 750 (MCA1209P750)

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 Tel: +1 800 265 7376
 Worldwide
 Tel: +44 (0)1865 852 700
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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets 'M378645:210222'

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