

## Datasheet: MCA643PE

**BATCH NUMBER 173407**

<b>Description:</b>	MOUSE ANTI RAT CD44:RPE
<b>Specificity:</b>	CD44
<b>Other names:</b>	H-CAM, PGP-1
<b>Format:</b>	RPE
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	OX-50
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	100 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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat

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.

<b>Target Species</b>	Rat		
<b>Product Form</b>	Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized		
<b>Reconstitution</b>	Reconstitute with 1 ml distilled water		
<b>Max Ex/Em</b>	<b>Fluorophore</b>	<b>Excitation Max (nm)</b>	<b>Emission Max (nm)</b>
	RPE 488nm laser	496	578
<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant		
<b>Buffer Solution</b>	Phosphate buffered saline		
<b>Preservative</b>	0.09% Sodium Azide		
<b>Stabilisers</b>	1% Bovine Serum Albumin		

5% Sucrose

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**Immunogen** Rat T cell blasts.

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**External Database Links**

**UniProt:**

[P26051](#)    [Related reagents](#)

**Entrez Gene:**

[25406](#) Cd44    [Related reagents](#)

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**RRID** AB\_321723

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**Fusion Partners** Spleen cells from immunised BALB/c mice were fused with cells of the mouse NS0/1 myeloma cell line.

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**Specificity** **Mouse anti Rat CD44 antibody, clone OX-50** recognizes the rat CD44 cell surface antigen, also known as Extracellular matrix receptor III, P90 lymphocyte homing/adhesion receptor, HUTCH-I, Hermes antigen, Hyaluronate receptor, Phagocytic glycoprotein 1, PGP-1 or Phagocytic glycoprotein I.

CD44 is a 482 amino acid ~85 kDa single pass type I transmembrane glycoprotein, expressed by T cells, B cells, macrophages and thymocytes, with expression being increased following activation.

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**Flow Cytometry** Use 10ul of the suggested working dilution to label  $10^6$  cells in 100ul.

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**References**

1. Stevenson, K.S. *et al.* (2009) Isolation, characterization, and differentiation of thy1.1-sorted pancreatic adult progenitor cell populations. [Stem Cells Dev. 18:1389-98.](#)
2. Jiang, T.S. *et al.* (2010) Reconstruction of the corneal epithelium with induced marrow mesenchymal stem cells in rats. [Mol Vis. 16: 1304-16.](#)
3. Kanellis, J. *et al.* (2010) JNK signalling in human and experimental renal ischaemia/reperfusion injury. [Nephrol Dial Transplant. 25: 2898-908.](#)
4. Li, S. *et al.* (2010) Upregulation of CXCR4 favoring neural-like cells migration via AKT activation. [Neurosci Res. 67: 293-9.](#)
5. Stephens, L.A. *et al.* (2004) Phenotypic characterization of regulatory CD4+CD25+ T cells in rats. [Int Immunol. 16: 365-75.](#)
6. Rice, C.M. *et al.* (2010) Multipotent adult progenitor cell isolation and proliferation in cytokine and serum-free medium conditioned by rat B104 cells. [Br J Haematol. 148: 441-4.](#)
7. Carulli, D. *et al.* (2006) Composition of perineuronal nets in the adult rat cerebellum and the cellular origin of their components. [J Comp Neurol. 494: 559-77.](#)
8. Galtrey, C.M. *et al.* (2008) Distribution and synthesis of extracellular matrix proteoglycans, hyaluronan, link proteins and tenascin-R in the rat spinal cord. [Eur J Neurosci. 27: 1373-90.](#)
9. Hofmann, N. *et al.* (2002) Increased expression of ICAM-1, VCAM-1, MCP-1, and MIP-1 alpha by spinal perivascular macrophages during experimental allergic encephalomyelitis in rats. [BMC Immunol. 3: 11.](#)

10. Walther, M. *et al.* (2001) Exogenous antigen containing perivascular phagocytes induce a non-encephalitogenic extravasation of primed lymphocytes. [J Neuroimmunol. 117: 30-42.](#)
11. Suzuki, A. *et al.* (2006) Localization of CD44 and hyaluronan in the synovial membrane of the rat temporomandibular joint. [Anat Rec A Discov Mol Cell Evol Biol. 288: 646-52.](#)
12. Goransson, V. *et al.* (2004) Renal hyaluronan accumulation and hyaluronan synthase expression after ischaemia-reperfusion injury in the rat. [Nephrol Dial Transplant. 19: 823-30.](#)
13. Campbell, N.G. *et al.* (2016) Cell Size Critically Determines Initial Retention of Bone Marrow Mononuclear Cells in the Heart after Intracoronary Injection: Evidence from a Rat Model. [PLoS One. 11 \(7\): e0158232.](#)
14. Bejar, M.T. *et al.* (2016) Inhibition of Notch rescues the angiogenic potential impaired by cardiovascular risk factors in epicardial adipose stem cells. [FASEB J. 30 \(8\): 2849-59.](#)
15. Rochefort, G.Y. *et al.* (2006) Multipotential mesenchymal stem cells are mobilized into peripheral blood by hypoxia. [Stem Cells. 24 \(10\): 2202-8.](#)
16. Redondo, J. *et al.* (2015) Reductions in kinesin expression are associated with nitric oxide-induced axonal damage. [J Neurosci Res. 93 \(6\): 882-92.](#)
17. Huang, X. *et al.* (2019) MRI Tracking of SPIO- and *Fth1*-Labeled Bone Marrow Mesenchymal Stromal Cell Transplantation for Treatment of Stroke. [Contrast Media Mol Imaging. 2019: 5184105.](#)
18. Aminzadeh, A. *et al.* (2020) Investigating The Alterations of Oxidative Stress Status, Antioxidant Defense Mechanisms, MAP Kinase and Mitochondrial Apoptotic Pathway in Adipose-Derived Mesenchymal Stem Cells from STZ Diabetic Rats. [Cell J. 22 \(Suppl 1\): 38-48.](#)
19. Paiva, R.G. *et al.* (2020) Stem cells in end-to-side neurorrhaphy. Experimental study in rats [Acta Cirúrgica Brasileira. 35 \(12\) \[Epub ahead of print\].](#)
20. Hou, B. *et al.* (2018) Comparison of the Effects of BMSC-derived Schwann Cells and Autologous Schwann Cells on Remyelination Using a Rat Sciatic Nerve Defect Model. [Int J Biol Sci. 14 \(13\): 1910-22.](#)
21. 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. [Toxicol Sci. kfz172.](#)
22. Chang, H.H. *et al.* (2019) Intrarenal Transplantation of Hypoxic Preconditioned Mesenchymal Stem Cells Improves Glomerulonephritis through Anti-Oxidation, Anti-ER Stress, Anti-Inflammation, Anti-Apoptosis, and Anti-Autophagy. [Antioxidants \(Basel\). 9 \(1\): 2.](#)
23. Wu, J. *et al.* (2022) Reinforcing the function of bone graft via the Ca-P ceramics dynamic behavior-enhanced osteogenic microenvironment for optimal bone regeneration and reconstruction [Applied Materials Today. 27: 101465.](#)
24. Cheng, Y.H. *et al.* (2022) Intrarenal Arterial Transplantation of Dexmedetomidine Preconditioning Adipose Stem-Cell-Derived Microvesicles Confers Further Therapeutic Potential to Attenuate Renal Ischemia/Reperfusion Injury through miR-122-5p/Erythropoietin/Apoptosis Axis. [Antioxidants \(Basel\). 11\(9\): 1702.](#)

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**Storage**

This product is shipped at ambient temperature.

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.

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<b>Guarantee</b>	12 months from date of despatch
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #20487 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA643PE">https://www.bio-rad-antibodies.com/SDS/MCA643PE</a>
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<b>Regulatory</b>	For research purposes only
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## Related Products

### Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:RPE \(MCA1209PE\)](#)

**Product inquiries:** [www.bio-rad-antibodies.com/technical-support](http://www.bio-rad-antibodies.com/technical-support)

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](http://bio-rad-antibodies.com/datasheets)  
'M441222:250523'

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