Datasheet: MCA643PE

BATCH NUMBER 156540

Description:	MOUSE ANTI RAT CD44:RPE
Specificity:	CD44
Other names:	H-CAM, PGP-1
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	OX-50
Isotype:	IgG1
Quantity:	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.

	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.

Target Species

Rat

Product Form

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

Reconstitution

Reconstitute with 1 ml 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 A from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers

0.09% Sodium Azide
1% Bovine Serum Albumin

	5% Sucrose
Immunogen	Rat T cell blasts.
External Database Links	**UniProt:** P26051 Related reagents **Entrez Gene:** 25406 Cd44 Related reagents
RRID	AB_321723
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the mouse NS0/1 myeloma cell line.
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.
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul.
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.*kfz172 (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.

Storage

Prior to reconstitution store at +4ºC. Following reconstitution store at +4ºC.

	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/MCA643PE 20487
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:RPE (MCA1209PE)

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

'M376231:210126'

Printed on 14 Apr 2025