

Datasheet: MCA643R

Description:	MOUSE ANTI RAT CD44	
Specificity:	CD44	
Other names:	H-CAM, PGP-1	
Format:	Purified	
Product Type:	Monoclonal Antibody	
Clone:	OX-50	
Isotype:	lgG1	
Quantity:	0.25 mg	

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	•			1/50 - 1/100
Immunohistology - Frozen (1)	•			
Immunohistology - Paraffin		•		
ELISA			•	
Immunoprecipitation			•	
Western Blotting			•	

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.

(1)The epitope recognised by this antibody is reported to be sensitive to formaldehyde fixation and tissue processing. Bio-Rad recommends the use of acetone fixation for frozen sections.

Target Species	Rat	
Product Form	Purified IgG - liquid	
Preparation	Purified IgG prepared by affinity chromatography on Protein A supernatant	A from tissue culture
Buffer Solution	Phosphate buffered saline	

Preservative Stabilisers	0.09% Sodium Azide		
Carrier Free	Yes		
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml		
lmmunogen	Rat T cell blasts.		
External Database Links	UniProt: P26051 Related reagents		
	Entrez Gene: 25406 Cd44 Related reagents		
RRID	AB_566756		
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	 Stevenson, K.S. <i>et al.</i> (2009) Isolation, characterization, and differentiation of thy1.1-sorted pancreatic adult progenitor cell populations. <u>Stem Cells Dev. 18:1389-98.</u> Jiang, T.S. <i>et al.</i> (2010) Reconstruction of the corneal epithelium with induced marrow mesenchymal stem cells in rats. <u>Mol Vis. 16: 1304-16.</u> Kanellis, J. <i>et al.</i> (2010) JNK signalling in human and experimental renal ischaemia/reperfusion injury. <u>Nephrol Dial Transplant. 25: 2898-908.</u> Li, S. <i>et al.</i> (2010) Upregulation of CXCR4 favoring neural-like cells migration via AKT activation. <u>Neurosci Res. 67: 293-9.</u> Stephens, L.A. <i>et al.</i> (2004) Phenotypic characterization of regulatory CD4+CD25+ T cells in rats. <u>Int Immunol. 16: 365-75.</u> Rice, C.M. <i>et al.</i> (2010) Multipotent adult progenitor cell isolation and proliferation in cytokine and serum-free medium conditioned by rat B104 cells. <u>Br J Haematol. 148:</u> 		

- 7. Carulli, D. *et al* (2006) Composition of perineuronal nets in the adult rat cerebellum and the cellular origin of their components. <u>J Comp Neurol</u>. 494: 559-77.
- 8. Galtrey, C.M. et al. (2008) Distribution and synthesis of extracellular matrix

<u>441-4.</u>

- proteoglycans, hyaluronan, link proteins and tenascin-R in the rat spinal cord. <u>Eur J Neurosci.</u> 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. <u>BMC Immunol. 3: 11.</u>
- 10. Walther, M. *et al.* (2001) Exogenous antigen containing perivascular phagocytes induce a non-encephalitogenic extravasation of primed lymphocytes. <u>J Neuroimmunol.</u> 117: 30-42.
- 11. Suzuki, A. *et al.* (2006) Localization of CD44 and hyaluronan in the synovial membrane of the rat temporomandibular joint. <u>Anat Rec A Discov Mol Cell Evol Biol. 288:</u> 646-52.
- 12. Goransson, V. *et al.* (2004) Renal hyaluronan accumulation and hyaluronan synthase expression after ischaemia-reperfusion injury in the rat. <u>Nephrol Dial Transplant.19:</u> 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. <u>FASEB J. 30 (8): 2849-59.</u>
- 15. Rochefort, G.Y. *et al.* (2006) Multipotential mesenchymal stem cells are mobilized into peripheral blood by hypoxia. <u>Stem Cells. 24 (10): 2202-8.</u>
- 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. <u>Contrast Media Mol Imaging</u>. 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. <u>Cell J. 22 (Suppl 1):</u> 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. <u>Int J Biol Sci. 14 (13): 1910-22.</u>
- 21. Porwal, K. *et al*.kfz172 (2019) Increased bone marrow-specific adipogenesis by clofazimine causes impaired fracture healing, osteopenia and osteonecrosis without extraskeletal effects in rats. <u>Toxicol Sci. kfz172.</u>
- 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. <u>Antioxidants (Basel). 9 (1):</u> 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

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.

Guarantee 12 months from date of despatch **Health And Safety** Material Safety Datasheet documentation #10040 available at: Information https://www.bio-rad-antibodies.com/SDS/MCA643R 10040

Regulatory For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...) HRP Rabbit Anti Mouse IgG (STAR12...) **RPE**

Goat Anti Mouse IgG (STAR70...) **FITC**

Goat Anti Mouse IgG IgA IgM (STAR87...) Alk. Phos., HRP

Goat Anti Mouse IgG (STAR76...) **RPE**

Goat Anti Mouse IgG (H/L) (STAR117...) Alk. Phos., DyLight®488, DyLight®550,

DyLight®650, DyLight®680, DyLight®800,

FITC, HRP

Rabbit Anti Mouse IgG (STAR13...) **HRP**

Goat Anti Mouse IgG (Fc) (STAR120...) FITC, HRP

Rabbit Anti Mouse IgG (STAR9...) **FITC**

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA1209)

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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 'M381452:210512'

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