

Datasheet: MCA2141T

BATCH NUMBER 1802

Description:	MOUSE ANTI HUMAN CD146
Specificity:	CD146
Other names:	MUC18
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	OJ79c
Isotype:	IgG1
Quantity:	25 µg

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	▪			1/10 - 1/50
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA	▪			
Immunoprecipitation			▪	
Western Blotting			▪	
Immunofluorescence	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species

Human

Species Cross Reactivity

Reacts with: Pig, Dog

N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form

Purified IgG - liquid

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

Carrier Free Yes

Approx. Protein Concentrations IgG concentration 1.0 mg/ml

Immunogen Recombinant human MUC18 (D1-D5) Fc protein.

External Database Links

UniProt:

[P43121](#) [Related reagents](#)

Entrez Gene:

[4162](#) MCAM [Related reagents](#)

Synonyms MUC18

RRID AB_2235247

Fusion Partners Spleen cells from immunised mice were fused with cells of the mouse Sp2/0 Ag.14 myeloma cell line.

Specificity **Mouse anti Human CD146 antibody, clone OJ79c** recognizes human Cell surface glycoprotein MUC18, also known as CD146, Cell surface glycoprotein P1H12, Melanoma cell adhesion molecule (MCAM) or S-endo 1 endothelial-associated antigen. CD146 is a 646 amino acid single pass type 1 transmembrane glycoprotein with a calculated molecular mass of ~72 kDa. However due to extensive N-linked glycosylation CD146 migrates in polyacrylamide gels with an apparent molecular mass of ~118 kDa. CD146 is a member of the immunoglobulin superfamily bearing 2 [V-type Ig-like](#) and 3 [C-type Ig-like domains](#). CD146 is expressed by all endothelial cells and by melanoma cells and appears to act as an adhesion molecule ([UniProt: P43121](#)). Expression in melanoma may be linked to tumor progression ([Lehmann et al. 1989](#)).

Mouse anti Human CD146 antibody, clone OJ79c is highly expressed on pericytes and has been utilized for the identification of perivascular mesenchymal precursor cells from cardiac muscle using flow cytometry ([Chen et al. 2014](#)).

Flow Cytometry Use 10ul of the suggested working dilution to label 10⁶ cells in 100ul.

Histology Positive Control Tissue Melanoma

References 1. Paul, G. *et al.* (2012) The adult human brain harbors multipotent perivascular

- mesenchymal stem cells. [PLoS One. 7: e35577.](#)
2. Crisan, M. *et al.* (2008) A perivascular origin for mesenchymal stem cells in multiple human organs. [Cell Stem Cell. 3: 301-13.](#)
 3. Iohara, K. *et al.* (2008) A novel stem cell source for vasculogenesis in ischemia: subfraction of side population cells from dental pulp. [Stem Cells. 26 \(9\): 2408-18.](#)
 4. Park, T.S. *et al.* (2010) Placental Perivascular Cells for Human Muscle Regeneration. [Stem Cells Dev. 20: 451-63.](#)
 5. Smith, K. *et al.* (2011) Mono- and tri-cationic porphyrin-monoclonal antibody conjugates: photodynamic activity and mechanism of action. [Immunology. 132: 256-65.](#)
 6. James, A.W. *et al.* (2012) Perivascular stem cells: a prospectively purified mesenchymal stem cell population for bone tissue engineering. [Stem Cells Transl Med. 1 \(6\): 510-9.](#)
 7. Wassmer, S.C. *et al.* (2011) Vascular endothelial cells cultured from patients with cerebral or uncomplicated malaria exhibit differential reactivity to TNF. [Cell Microbiol. 13: 198-209.](#)
 8. Lee, J.H. *et al.* (2012) Generation of osteogenic construct using periosteal-derived osteoblasts and polydioxanone/pluronic F127 scaffold with periosteal-derived CD146 positive endothelial-like cells. [J Biomed Mater Res A.101: 942-53.](#)
 9. Boneberg, E.M. *et al.* (2009) Soluble CD146 is generated by ectodomain shedding of membrane CD146 in a calcium-induced, matrix metalloprotease-dependent process. [Microvasc Res. 78: 325-31.](#)
 10. Murakami, M. *et al.* (2012) Identification of novel function of vimentin for quality standard for regenerated pulp tissue. [J Endod. 38: 920-6.](#)
 11. Nielsen, C.T. *et al.* (2011) Distinct features of circulating microparticles and their relationship to clinical manifestations in systemic lupus erythematosus. [Arthritis Rheum. 63: 3067-77.](#)
 12. Zhang, Y. *et al.* (2009) The Impact of Proliferative Potential of Umbilical Cord-Derived Endothelial Progenitor Cells and Hypoxia on Vascular Tubule Formation *In Vitro*. [Stem Cells Dev. 18: 359-75.](#)
 13. Iversen, L.V. *et al.* (2013) A heparin-based method for flow cytometric analysis of microparticles directly from platelet-poor plasma in calcium containing buffer. [J Immunol Methods. 388 \(1-2\): 49-59.](#)
 14. Meireles, A.L. *et al.* (2011) Increased levels of circulating endothelial progenitor cells in human T-cell lymphotropic virus type I carriers. [Arch Med Res. 42: 34-7.](#)
 15. Iversen, L.V. *et al.* (2013) Circulating microparticles and plasma levels of soluble E- and P-selectins in patients with systemic sclerosis. [Scand J Rheumatol. 42 \(6\): 473-82.](#)
 16. Murakami, M. *et al.* (2013) The use of granulocyte-colony stimulating factor induced mobilization for isolation of dental pulp stem cells with high regenerative potential. [Biomaterials. pii: S0142-9612\(13\)00942-3.](#)
 17. Ruetze, M. *et al.* (2013) A novel niche for skin derived precursors in non-follicular skin. [J Dermatol Sci. 69: 132-9.](#)
 18. Dokić, J. *et al.* (2013) Mesenchymal stem cells from periapical lesions modulate differentiation and functional properties of monocyte-derived dendritic cells. [Eur J Immunol. 43: 1862-72.](#)
 19. Chen, W.C. *et al.* (2015) Human myocardial pericytes: multipotent mesodermal precursors exhibiting cardiac specificity. [Stem Cells. 33 \(2\): 557-73.](#)
 20. Iversen, L.V. *et al.* (2015) Cross-sectional study of soluble selectins, fractions of

- circulating microparticles and their relationship to lung and skin involvement in systemic sclerosis. [BMC Musculoskelet Disord. 16: 191.](#)
21. Tawonsawatruk T *et al.* (2016) Adipose derived pericytes rescue fractures from a failure of healing - non-union. [Sci Rep. 6: 22779.](#)
 22. Boissier, R. *et al.* (2016) Histologic and urodynamic effects of autologous stromal vascular fraction extracted from fat tissue with minimal *ex vivo* manipulation on a porcine model of intrinsic sphincter deficiency [J Urology. Jun 2 \[Epub ahead of print\]](#)
 23. Esteves, C.L. *et al.* (2017) Equine Mesenchymal Stromal Cells Retain a Pericyte-Like Phenotype. [Stem Cells Dev. 26 \(13\): 964-72.](#)
 24. Stefanska, A. *et al.* (2016) Human kidney pericytes produce renin. [Kidney Int. 90 \(6\): 1251-61.](#)
 25. Lapin, M. *et al.* (2016) MINDEC-An Enhanced Negative Depletion Strategy for Circulating Tumour Cell Enrichment. [Sci Rep. 6: 28929.](#)
 26. Muerza-Cascante, M.L. *et al.* (2016) Endosteal-like extracellular matrix expression on melt electrospun written scaffolds. [Acta Biomater. pii: S1742-7061\(16\)30706-1.](#)
 27. Eliasberg, C.D. *et al.* (2017) Perivascular Stem Cells Diminish Muscle Atrophy Following Massive Rotator Cuff Tears in a Small Animal Model. [J Bone Joint Surg Am. 99 \(4\): 331-41.](#)
 28. James, A.W. *et al.* (2017) Isolation and characterization of canine perivascular stem/stromal cells for bone tissue engineering. [PLoS One. 12 \(5\): e0177308.](#)
 29. Shen, J. *et al.* (2018) Effects of WNT3A and WNT16 on the Osteogenic and Adipogenic Differentiation of Perivascular Stem/Stromal Cells. [Tissue Eng Part A. 24 \(1-2\): 68-80.](#)
 30. Lapin, M. *et al.* (2017) Single-cell mRNA profiling reveals transcriptional heterogeneity among pancreatic circulating tumour cells. [BMC Cancer. 17 \(1\): 390.](#)
 31. Esteves, C.L. *et al.* (2017) Isolation and characterization of equine native MSC populations. [Stem Cell Res Ther. 8 \(1\): 80.](#)
 32. Gaceb, A. *et al.* (2017) Pericytes secrete pro-regenerative molecules in response to platelet-derived growth factor-BB. [J Cereb Blood Flow Metab. : 271678X17719645.](#)
 33. Noda, S. *et al.* (2019) Effect of cell culture density on dental pulp-derived mesenchymal stem cells with reference to osteogenic differentiation. [Sci Rep. 9 \(1\): 5430.](#)

Further Reading

1. Kuzu, I. *et al.* (1993) Expression of adhesion molecules on the endothelium of normal tissue vessels and vascular tumors. [Lab Invest. 69 \(3\): 322-8.](#)
2. Piriou-Guzylack, L. (2008) Membrane markers of the immune cells in swine: an update. [Vet Res. 39: 54.](#)

Storage

Store at +4°C or at -20°C if preferred.

Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. 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 #10040 available at: <https://www.bio-rad-antibodies.com/SDS/MCA2141T>
10040

Related Products

Recommended Secondary Antibodies

Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	HRP
Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG (STAR70...)	FITC
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos. , DyLight®488 , DyLight®550 , DyLight®650 , DyLight®680 , DyLight®800 , FITC , HRP
Goat Anti Mouse IgG (STAR77...)	HRP
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC , HRP
Rabbit Anti Mouse IgG (STAR13...)	HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC

Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL \(MCA928\)](#)

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
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'M366245:200529'

Printed on 17 Apr 2024