Datasheet: MCA2141

Description:	MOUSE ANTI HUMAN CD146
Specificity:	CD146
Other names:	MUC18
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	OJ79c
Isotype:	IgG1
Quantity:	0.2 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	▪			1/10 - 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.
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 (NaN_3)
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
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 10^6 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.

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Further Reading

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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.
Shelf Life	18 months from date of despatch.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: 10040: https://www.bio-rad-antibodies.com/uploads/MSDS/10040.pdf
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR76...)	RPE
Goat Anti Mouse IgG IgA IgM (STAR87...)	Alk. Phos., HRP
Rabbit Anti Mouse IgG (STAR9...)	FITC
Goat Anti Mouse IgG (STAR77...)	HRP
Rabbit Anti Mouse IgG (STAR12...)	RPE
Goat Anti Mouse IgG (Fc) (STAR120...)	FITC, HRP
Rabbit Anti Mouse IgG (STAR8...)	DyLight®800
Goat Anti Mouse IgG (STAR70...)	FITC
Rabbit Anti Mouse IgG (STAR13...)	HRP
Human Anti Mouse IgG1 (HCA036...)	HRP
Goat Anti Mouse IgG (H/L) (STAR117...)	Alk. Phos., DyLight®488, DyLight®549, DyLight®649, DyLight®680, DyLight®800, FITC, HRP

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA928)

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