

**MOUSE ANTI-HUMAN ENDOTHELIAL CELLS [CD146]  
ALEXA FLUOR<sup>®</sup> 488 CONJUGATED MONOCLONAL ANTIBODY**

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<b>CATALOG NUMBER:</b>	MAB16985X	<b>QUANTITY:</b>	100 ug
<b>LOT NUMBER:</b>		<b>CONCENTRATION:</b>	1 mg/mL
<b>CLONE NAME:</b>	P1H12	<b>HOST/ISOTYPE:</b>	Ms IgG <sub>1</sub>
<b>ALTERNATE NAMES:</b>	CD146, MCAM, MUC18		

**BACKGROUND:** MUC18 antigen (CD146), a member of the immunoglobulin superfamily, is an intrinsic membrane glycoprotein of 110-120 kDa found on the surface of endothelial cells, bone marrow fibroblasts and various melanomas. MUC18 has been used as a marker of tumor progression in human melanoma because expression in those tumors correlates strongly with poor prognosis and the development of metastatic disease. In addition, a number of human T, B and myeloid leukemic cell lines seem to express MUC18. The close structural relationship with N-CAM and related molecules suggests that MUC18 may be also a developmentally regulated cell adhesion molecule (Melanoma adhesion molecule or MCAM).

**SPECIFICITY:** P1H12 reacts specifically with CD146 {MCAM, MUC18}. In blood and marrow P1H12 reacts only with endothelial cells, and has been used to detect circulating endothelial cells in human, dogs, rabbits and mouse samples. It positively stains normal, primary HUVEC and MVEC cultures and the endothelial cells of all vessels in normal frozen sections of human skin, intestine, ovary tonsil, lymph node, lung, and kidney. It does not stain carcinoma cell lines HT-29 and COLO205, and M21, the T cell lines Jurkat and HuT78, fibroblasts, HL-60 or CHO cells, or EBV-transformed B cell lines, although it expected that CD146 expression is present in many tumor lines. P1H12 does not stain normal monocytes, granulocytes, red cells, platelets, T cells or B cells from marrow or peripheral blood; nor does it detect marrow megakaryocytes or the megakaryoblast line HU3. The peripheral blood cells that do stain with P1H12 also are positive for both von Willebrand Factor (vWF) and thrombomodulin (the combined expression of which is limited to endothelium), and they stain for flt and flk. In recent testing, melanoma A2058, SKMEL.3 and A375.S2 are positive, while murine melanoma M3 is negative. One smooth muscle line (HISM) was positive and one negative (TIGHA-VSMC). Human blood lymphocytes are negative with or without prior stimulation.

**IMMUNOGEN:** Immunization of mice with HUVECs

**APPLICATIONS:** Flow Cytometry: 1-10 µg/mL  
Immunofluorescence: 10-50 µg/mL  
Immunocytochemistry: 1-10 µg/mL, works best on EDTA- or trypsin-lifted endothelial cells.  
Immunohistochemistry: 1-10 µg/mL, 4% PFA for 30min RT or <2hrs @ 4°C. Block w/ 1%BSA/0.2%tween20/PBS for 30min. Works well in frozen tissue; fixed or unfixed.  
*Optimal working dilutions must be determined by end user.*

**SPECIES REACTIVITY:** Reacts with Human, Mouse, Rabbit, Canine. Does not react with Rat. Reactivity with other species has not been determined.

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- FORMAT:** Purified immunoglobulin conjugated to Alexa Fluor<sup>®</sup> 488.
- PRESENTATION:** Purified immunoglobulin conjugated to Alexa Fluor<sup>®</sup> 488 presented as liquid in 0.02 M PBS, 0.2 5M NaCl, pH=7.2, 15 mg/nL BSA containing 0.1% sodium azide as a preservative.
- STORAGE/HANDLING:** Maintain at 2-8°C in undiluted aliquots for up to 12 months from date of receipt.
- RELATED REFERENCES:**
- Deregibus, CM et al. (2002). HIV-1-Tat Protein Activates Phosphatidylinositol 3-Kinase/ AKT-dependent Survival Pathways in Kaposi's Sarcoma Cells. *J Biol. Chem.* **277(28)** : 25195-25202.
- Cornacchia, F et al. (2001). Glomerulosclerosis is transmitted by bone marrow–derived mesangial cell progenitors. *J Clin. Invest* **108(11)** : 1649-1656.
- Mancuso, P et al (2001). Resting and activated endothelial cells are increased in the peripheral blood of cancer patients . *Blood* **97(11)** : 3658-3661.
- St. Croix, B. et al. (2000). Genes expressed in human tumor endothelium. *Science* **2000** : 1197-1202.
- Ikpeazu, C. et al. (2000). Donor Origin of Circulating endothelial progenitors after allogenic bone marrow transplantation. *Biol. Blood Marrow Transplant* **6(3A)** : 301-308.
- Chukwuemeka, I et al. (2000). Donor Origin of Circulating Endothelial Progenitors After Allogeneic Bone Marrow Transplantation. *Amer. Soc. Blood Marrow Transplantation*.
- Gui, et al. (1998). P1H12 as an embryonic endothelial-endothelial adhesion molecule and possible hemangioblast marker. *Blood* **92 (supplement 1)** : Abstract #697.
- Solovey, A. et al. (1997). Circulating activated endothelial cells in sickle cell anemia. *N. Engl. J. Med.* **337(22)** : 1584-1590.
- Solovey, A et al. (1997). Circulating Activated Endothelial Cells in Sickle Cell Anemia. *New England J Med* **337(22)** : 1584-1590.
- Lehmann, J. et al. (1989). MUC18, a marker of tumor progression in human melanoma, shows sequence similarity to the neural cell adhesion molecules of the immunoglobulin superfamily. *Proc. Nat. Acad. Sci. USA* **86(24)** : 9891-9895.

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*For research use only; not for use as a diagnostic.*

**Important Note:** *During shipment, small volumes of product will occasionally become entrapped in the seal of the product vial. For products with volumes of 200 µL or less, we recommend gently tapping the vial on a hard surface or briefly centrifuging the vial in a tabletop centrifuge to dislodge any liquid in the container's cap.*

