

#13475 Store at -20C

**MCAM (P1H12) Mouse mAb****Cell Signaling**  
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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC, FC-FP	H	Endogenous	120	Mouse IgG1	#P43121	4162

**Product Usage Information****Application**

Western Blotting  
Immunoprecipitation  
Immunofluorescence (Immunocytochemistry)  
Flow Cytometry (Fixed/Permeabilized)

**Dilution**

1:1000  
1:100  
1:100  
1:200

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. *Do not aliquot the antibody.*

**Specificity / Sensitivity**

MCAM (P1H12) Mouse mAb recognizes endogenous levels of total MCAM protein.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the amino terminus of human MCAM protein.

**Background**

Melanoma cell adhesion molecule (MCAM, MUC18, CD146) is an immunoglobulin superfamily member originally described as a cell surface adhesion protein and marker of the progression and metastasis of melanoma (1,2). Expression of MCAM protein is seen in vascular endothelial cells, activated T lymphocytes, smooth muscle, and bone marrow stromal cells. Research studies demonstrate increased MCAM expression in endothelial cells from angiogenesis-related disorders, including inflammatory bowel disease, Crohn's disease, rheumatoid arthritis, tumors, and chronic renal failure (3). MCAM-expressing human mesenchymal stromal cells (hMSC) in the hematopoietic microenvironment are responsible for maintaining the self-renewal of hematopoietic stem and progenitor cells (HSPC) through direct contact between hMSC and HSPC (2). Related studies suggest that activation of the Notch signaling pathway may also, in part, play a role in HSPC maintenance (4). Additional research indicates that MCAM may play a role in multiple sclerosis, an autoimmune inflammatory disease that affects central nervous system neurons. Endothelial MCAM within the blood-brain barrier act as adhesion receptors that permit lymphocytes to transigrate across the barrier and produce the inflammatory lesions that characterize the disorder (5).

**Background References**

- Shih, I.M. (1999) *J Pathol* 189, 4-11.
- Stopp, S. et al. (2013) *Haematologica* 98, 505-13.
- Wang, P. et al. (2013) *Mol Cell Biol* 33, 3689-99.
- Corselli, M. et al. (2013) *Blood* 121, 2891-901.
- Duan, H. et al. (2013) *Sci Rep* 3, 1687.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**WB:** Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)  
**FC-FP:** Flow Cytometry (Fixed/Permeabilized)

**Cross-Reactivity Key**

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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