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TEM1 Antibody

Catalog # ASC10595

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q9HCU0
Other Accession	NP_065137, 9966885
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	80859
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TEM1 antibody can be used for detection of TEM1 by Western blot at 0.5 - 1 g/mL. Antibody can also be used for immunohistochemistry starting at 2.5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	57124
Other Names	Endosialin, Tumor endothelial marker 1, CD248, CD248, CD164L1, TEM1
Target/Specificity	CD248; At least two isoforms of TEM1 are known to exist; this antibody recognizes both isoforms.
Reconstitution & Storage	TEM1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	TEM1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD248
Synonyms	CD164L1, TEM1
Function	Cell surface glycoprotein involved in various biological processes including angiogenesis, immune response modulation, and tissue remodeling and repair. Participates in pericyte proliferation through positive modulation of the PDGF receptor signaling pathway (PubMed:20484976). Acts as a scaffold for factor X, triggering allosteric changes and the spatial re-alignment of factor X with the TF-factor VIIa complex, thereby enhancing coagulation activation. Modulates the insulin signaling pathway by interacting with insulin

	receptor/INSR and by diminishing its capacity to be autophosphorylated in response to insulin. Also regulates LPS-induced inflammatory response in macrophages by favoring the production of proinflammatory cytokines. In human, negatively regulates T-cell proliferation compared with stromal cells where it increases proliferation (PubMed:21466550).
Cellular Location	Membrane; Single-pass type I membrane protein
Tissue Location	Expressed in tumor endothelial cells but absent or barely detectable in normal endothelial cells. Expressed in metastatic lesions of the liver and during angiogenesis of corpus luteum formation and wound healing. Expressed in vascular endothelial cells of malignant tumors but not in normal blood vessels. Expressed in stromal fibroblasts. Strongly expressed in pericytes (PubMed:20484976) Expressed on stromal cells and cells with lymphoid morphology such a T- cells (PubMed:21466550).

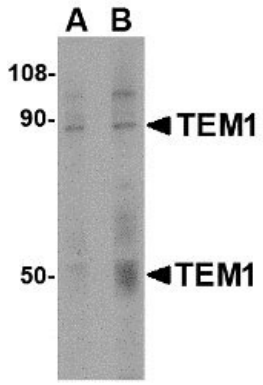
Background

TEM1 Antibody: Tumor endothelial marker (TEM) 1 was originally identified as a human embryonic fibroblast-specific antigen and was later determined to be endosialin, a single-pass transmembrane glycoprotein that has multiple extracellular domains, including three EGF-like domains, a sushi-like domain, and a C lectin-like domain. TEM proteins are significantly up-regulated during angiogenesis and neoangiogenesis that are crucial for the growth of solid tumors. While TEM1 is not required for angiogenesis during fetal development, postnatal growth or wound healing, it plays a role in tumor growth, invasion, and metastasis. Fibronectin and collagen types I and IV act as specific ligands of TEM1, leading to suggestions that these molecules may cause changes in the extracellular matrix, cell adhesion and migration during tumor invasion.

References

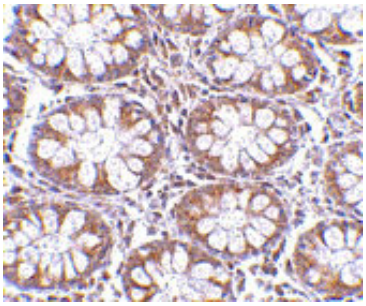
Rettig WJ, Garin-Chesa P, Healey JH, et al. Identification of endosialin, a cell surface glycoprotein of vascular endothelial cells in human cancer. Proc. Natl. Acad. Sci. USA 1992; 89:10832-6.
Christian S, Ahorn H, Koehler A, et al. Molecular cloning and characterization of endosialin, a C-type lectin-like cell surface receptor of tumor endothelium. J. Biol. Chem. 2001; 276:7408-14.
Nanda A and St Croix B. Tumor endothelial markers: new targets for cancer therapy. Curr. Opin. Oncol. 2004; 16:44-9.
Nanda A, Karim B, Peng Z, et al. Tumor endothelial marker 1 (TEM1) functions in the growth and progression of abdominal tumors. Proc. Natl. Acad. Sci. USA 2006; 103:3351-6.

Images



Western blot analysis of TEM1 in human colon tissue lysate with TEM1 antibody at (A) 0.5 and (B) 1 µg/mL.

Immunohistochemistry of TEM1 in human colon tissue with TEM1 antibody at 2.5 µg/mL.





Immunofluorescence of TEM1 in Human Colon tissue with TEM1 antibody at 20 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.