

TEM7 (4H260): sc-73135

BACKGROUND

Tumor endothelial markers (TEMs) are abundantly expressed in the blood vessels of human solid tumors during angiogenesis and neoangiogenesis. These include TEM1 (endosialin), TEM5 (G protein-coupled receptor 124) and TEM7 (plexin domain containing 1). TEMs are associated with the cell surface membrane at low levels in normal human and mouse tissues. TEM5 is a seven-pass transmembrane receptor, whereas TEM1, TEM7 and TEM8 span the membrane once. TEM5 expression is elevated during tumor angiogenesis and neoangiogenesis. TEM7 is highly expressed in tumor endothelium and neurons. Therefore, TEM5 and TEM7 may be suitable targets for the development of antiangiogenic therapies.

REFERENCES

1. Carson-Walter, E.B., et al. 2001. Cell surface tumor endothelial markers are conserved in mice and humans. *Cancer Res.* 61: 6649-6655.
2. Nanda, A., et al. 2004. Identification of a binding partner for the endothelial cell surface proteins TEM7 and TEM7R. *Cancer Res.* 64: 8507-8511.
3. Yamamoto, Y., et al. 2004. Direct binding of the human homologue of the *Drosophila* disc large tumor suppressor gene to seven-pass transmembrane proteins, tumor endothelial marker 5 (TEM5), and a novel TEM5-like protein. *Oncogene* 23: 3889-3897.
4. Wang, X.Q., et al. 2005. Modulation of tumor endothelial cell marker 7 expression during endothelial cell capillary morphogenesis. *Microvasc. Res.* 70: 189-197.
5. Lee, H.K., et al. 2006. Identification of the basement membrane protein nidogen as a candidate ligand for tumor endothelial marker 7 *in vitro* and *in vivo*. *FEBS Lett.* 580: 2253-2257.
6. Lee, H.K., et al. 2006. Expression of tumor endothelial marker 7 mRNA and protein in the dorsal root ganglion neurons of the rat. *Neurosci. Lett.* 402: 71-75.

CHROMOSOMAL LOCATION

Genetic locus: PLXDC1 (human) mapping to 17q12; Plxdc1 (mouse) mapping to 11 D.

SOURCE

TEM7 (4H260) is a mouse monoclonal antibody raised against amino acids 411-427 of TEM7 of human origin.

PRODUCT

Each vial contains 50 µg IgG₁ in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

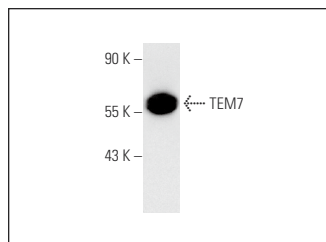
TEM7 (4H260) is recommended for detection of TEM7 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for TEM7 siRNA (h): sc-61663, TEM7 siRNA (m): sc-61664, TEM7 shRNA Plasmid (h): sc-61663-SH, TEM7 shRNA Plasmid (m): sc-61664-SH, TEM7 shRNA (h) Lentiviral Particles: sc-61663-V and TEM7 shRNA (m) Lentiviral Particles: sc-61664-V.

Molecular Weight of TEM7: 60 kDa.

Positive Controls: T98G cell lysate: sc-2294, U-87 MG cell lysate: sc-2411 or ECV304 cell lysate: sc-2269.

DATA



TEM7 (4H260): sc-73135. Western blot analysis of TEM7 expression in T98G whole cell lysate.

SELECT PRODUCT CITATIONS

1. Whyte, J.L., et al. 2011. Density of human bone marrow stromal cells regulates commitment to vascular lineages. *Stem Cell Res.* 6: 238-250.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.