10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TEM5 Antibody

Catalog # ASC10601

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q96PE1
Other Accession	Q96PE1, 221222450
Reactivity	Human, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	142647
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TEM5 antibody can be used for detection of TEM5 by Western blot at 2 and 4 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	25960
Other Names	G-protein coupled receptor 124, Tumor endothelial marker 5, GPR124, KIAA1531, TEM5
Target/Specificity	GPR124;
Reconstitution & Storage	TEM5 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	TEM5 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ADGRA2 (HGNC:17849)
Function	Endothelial receptor which functions together with RECK to enable brain endothelial cells to selectively respond to Wnt7 signals (WNT7A or WNT7B) (PubMed:28289266, PubMed:30026314). Plays a key role in Wnt7-specific responses, such as endothelial cell sprouting and migration in the forebrain and neural tube, and establishment of the blood-brain barrier (By similarity). Acts as a Wnt7-specific coactivator of canonical Wnt signaling: required to deliver RECK-bound Wnt7 to frizzled by assembling a higher-order RECK-ADGRA2-Fzd-LRP5-LRP6 complex (PubMed:30026314). ADGRA2-tethering function does not rely on its G protein-coupled receptor

	(GPCR) structure but instead on its combined capacity to interact with RECK extracellularly and recruit the Dishevelled scaffolding protein intracellularly (PubMed:30026314). Binds to the glycosaminoglycans heparin, heparin sulfate, chondroitin sulfate and dermatan sulfate (PubMed:16982628).
Cellular Location	Cell membrane; Multi-pass membrane protein. Cell projection, filopodium. Note=Enriched at lateral cell borders and also at sites of cell-ECM (extracellular matrix) contact
Tissue Location	Expressed in endothelial cells (at protein level) (PubMed:15021905, PubMed:16982628). Abundantly expressed in heart, placenta, ovary, small intestine, and colon (PubMed:15021905)

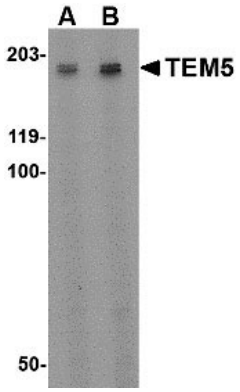
Background

TEM5 Antibody: Tumor endothelial markers (TEMs) are significantly up-regulated during angiogenesis and neoangiogensis that are crucial for the growth of solid tumors. TEMs localized on the cell surface and conserved across species are of particular interest for future development of anti-angiogenic therapies. These include TEMs such as TEM1, TEM5, TEM7 and TEM8. TEM5 is a member of the adhesion family of G protein coupled receptors and is localized on the surface of endothelial cells. TEM5 is a seven-pass transmembrane receptor, unlike TEM1, TEM7 and TEM8 which span the membrane once. TEM5 is abundantly expressed in tumor vessels, heart, placenta, ovary, small intestine, and colon. Proteolytically processed soluble TEM5 mediates endothelial cell survival during angiogenesis by linking integrin to glycosaminoglycans.

References

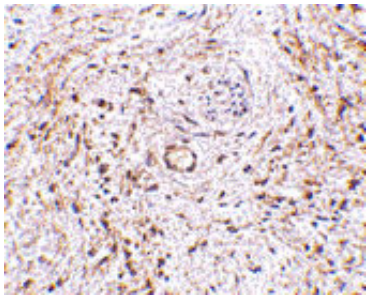
Carson-Walter EB, Watkins DN, Nanda A, et al. Cell surface tumor endothelial markers are conserved in mice and humans. Cancer Res.2001; 61:6649-55.
Yamamoto Y, Irie K, Nanda A, et al. Direct binding of the human homologue of the Drosophila disc large tumor suppressor gene to seven-pass transmembrane proteins, tumor endothelial marker 5 (TEM5), and a novel TEM5-like protein. Oncogene2004; 23:3889-97.
Davies G, Cunnick GH, Mansel RE, et al. Levels of expression of endothelial markers specific to tumour-associated endothelial cells and their correlation with prognosis in patients with breast cancer. Clinical & Experimental Metastasis2004; 21:31-7.
Vallon M and Essler M. Proteolytically processed soluble tumor endothelial marker (TEM) 5 mediates endothelial cell survival during angiogenesis by linking integrin alpha(v)beta3 to glycosaminoglycans. J. Biol. Chem.2006; 281:34179-88.

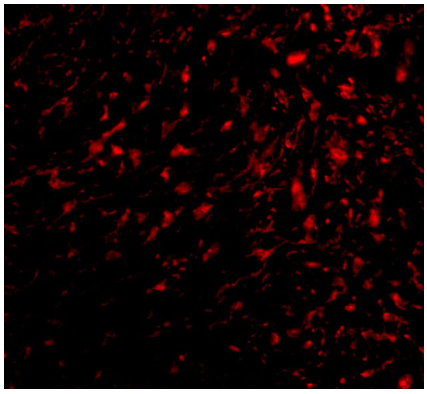
Images



Western blot analysis of TEM5 in rat kidney tissue lysate with TEM5 antibody at (A) 2 µg/ml and (B) 4 µg/mL.

Immunohistochemistry of TEM5 in human bladder tissue with TEM5 antibody at 5 µg/mL.





Immunofluorescence of TEM5 in human bladder tissue with TEM5 antibody at 20 µg/mL.

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