

Tie-1 (h): 293T Lysate: sc-115397

BACKGROUND

Receptor tyrosine kinases play key roles in signal transduction across cell surfaces in biological systems, including the vascular system. These receptors comprise a large and diverse family of catalytically related proteins that, on the basis of sequence and structural similarities, can be divided into several different evolutionary subfamilies. The cloning and characterization of Tie-1 (also designated Tie), a novel human endothelial cell surface receptor tyrosine kinase, has been reported. The extracellular domain of the predicted Tie-1 protein product has an unusual multidomain structure consisting of a cluster of three epidermal growth factor homology motifs localized between two immunoglobulin-like loops, which are followed by three Fibronectin type III repeats next to the transmembrane region. An additional member of this family has been identified as Tie-2 (also designated Tek). Tie-1 and Tie-2 have been shown to be encoded by distinct genes and to represent members of a new class of receptor tyrosine kinases.

REFERENCES

1. Pawson, T. and Bernstein, A. 1991. Receptor tyrosine kinases: genetic evidence for their role in *Drosophila* and mouse development. *Trends Gen.* 6: 350-356.
2. de Vries, C., Escobedo, J.A., Ueno, H., Houck, K., Ferrara, N. and Williams, L.T. 1992. The Fms-like tyrosine kinase, a receptor for vascular endothelial growth factor. *Science* 255: 989-991.
3. Partanen, J., Armstrong, E., Mäkelä, T.P., Korhonen, J., Sandberg, M., Renkonen, R., Knuutila, S., Huebner, K. and Alitalo, K. 1992. A novel endothelial cell surface receptor tyrosine kinase with extracellular epidermal growth factor homology domains. *Mol. Cell. Biol.* 12: 1698-1707.
4. Dumont, D.J., Yamaguchi, T.P., Conlon, R.A. and Rossant, J. 1992. Tek, a novel tyrosine kinase gene located on mouse chromosome 4 is expressed in endothelial cells and their presumptive precursors. *Oncogene* 7: 1471-1480.
5. Sato, T.N., Qin, Y., Kozak, C.A. and Audus, K.L. 1993. Tie-1 and Tie-2 define another class of putative receptor tyrosine kinase genes expressed in early embryonic vascular system. *Proc. Natl. Acad. Sci. USA* 90: 9355-9358.
6. Dumont, D.J., Gradwohl, G.J., Fong, G., Auerbach, R. and Breitman, M.L. 1993. The endothelial-specific receptor tyrosine kinase, Tek, is a member of a new subfamily of receptors. *Oncogene* 8: 1293-1301.

CHROMOSOMAL LOCATION

Genetic locus: TEK (human) mapping to 9p21.2.

PRODUCT

Tie-1 (h): 293T Lysate represents a lysate of human Tie-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

Tie-1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Tie-1 antibodies. MRcommended use: 10-20 µl per lane.

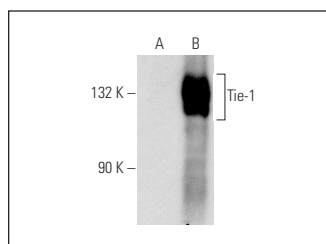
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Tie-1 (G-12): sc-365961 is recommended as a positive control antibody for Western Blot analysis of enhanced human Tie-1 expression in Tie-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

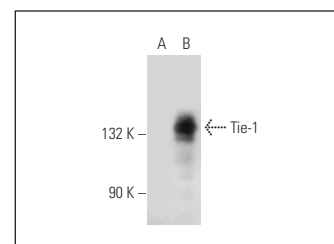
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Tie-1 (G-12): sc-365961. Western blot analysis of Tie-1 expression in non-transfected: sc-117752 (A) and human Tie-1 transfected: sc-115397 (B) 293T whole cell lysates.



Tie-1 (12D9): sc-101587. Western blot analysis of Tie-1 expression in non-transfected: sc-117752 (A) and human Tie-1 transfected: sc-115397 (B) 293T whole cell lysates.

RESEARCH USE

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

PROTOCOLS

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