

Tie-1 (G-12): sc-365961

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., et al. 1991. Receptor tyrosine kinases: genetic evidence for their role in *Drosophila* and mouse development. *Trends Genet.* 6: 350-356.
2. de Vries, C., et al. 1992. The fms-like tyrosine kinase, a receptor for vascular endothelial growth factor. *Science* 255: 989-991.
3. Partanen, J., et al. 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., et al. 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., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: TIE1 (human) mapping to 1p34.2.

SOURCE

Tie-1 (G-12) is a mouse monoclonal antibody raised against amino acids 25-204 of Tie-1 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Tie-1 (G-12) is available conjugated to agarose (sc-365961 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365961 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365961 PE), fluorescein (sc-365961 FITC), Alexa Fluor[®] 488 (sc-365961 AF488), Alexa Fluor[®] 546 (sc-365961 AF546), Alexa Fluor[®] 594 (sc-365961 AF594) or Alexa Fluor[®] 647 (sc-365961 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-365961 AF680) or Alexa Fluor[®] 790 (sc-365961 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Tie-1 (G-12) is recommended for detection of Tie-1 of human origin by Western Blotting (starting dilution 1:100, 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Tie-1 siRNA (h): sc-36675, Tie-1 shRNA Plasmid (h): sc-36675-SH and Tie-1 shRNA (h) Lentiviral Particles: sc-36675-V.

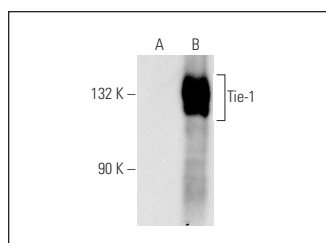
Molecular Weight of Tie-1: 110 kDa.

Positive Controls: Tie-1 (h): 293T Lysate: sc-115397, JAR cell lysate: sc-2276 or ES-2 cell lysate: sc-24674.

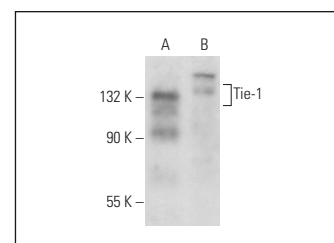
RECOMMENDED SUPPORT REAGENTS

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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

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 (G-12): sc-365961. Western blot analysis of Tie-1 expression in ES-2 (A) and JAR (B) whole cell lysates.

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.

PROTOCOLS

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

Alexa Fluor[®] is a trademark of Molecular Probes, Inc., Oregon, USA