SANTA CRUZ BIOTECHNOLOGY, INC.

Tie-2 (F-8): sc-518137

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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. Dumont, D.J., et al. 1993. The endothelial-specific receptor tyrosine kinase, Tek, is a member of a new subfamily of receptors. Oncogene 8: 1293-1301.
6. 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: TEK (human) mapping to 9p21.2.

SOURCE

Tie-2 (F-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 816-836 of Tie-2 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 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.

APPLICATIONS

Tie-2 (F-8) is recommended for detection of Tie-2 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-2 siRNA (h): sc-36677, Tie-2 shRNA Plasmid (h): sc-36677-SH and Tie-2 shRNA (h) Lentiviral Particles: sc-36677-V.

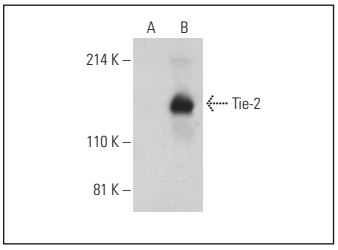
Molecular Weight of Tie-2: 140 kDa.

Positive Controls: Tie-2 (h): 293T Lysate: sc-114200.

RECOMMENDED SECONDARY 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 L-Agarose: sc-2336 (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-2 (F-8): sc-518137. Western blot analysis of Tie-2 expression in 293T (**A**) and sc-114200 (F2420) (**B**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

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.