SANTA CRUZ BIOTECHNOLOGY, INC.

# Tie-2 (C-20): sc-324

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.

## CHROMOSOMAL LOCATION

Genetic locus: TEK (human) mapping to 9p21.2, TIE1 (human) mapping to 1p34.2; Tek (mouse) mapping to 4 C5, Tie1 (mouse) mapping to 4 D2.1.

## SOURCE

Tie-2 (C-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the C-terminus of Tie-2 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-324 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as agarose conjugate for immunoprecipitation, sc-324 AC, 500 µg/0.25 ml agarose in 1 ml.

Available as HRP conjugate for Western blotting, sc-324 HRP, 200 µg/ml.

## APPLICATIONS

Tie-2 (C-20) is recommended for detection of Tie-2 and, to a lesser extent, Tie-1 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Tie-2 (C-20) is also recommended for detection of Tie-2 and, to a lesser extent, Tie-1 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Tie-2: 140 kDa.

Positive Controls: Tie-2 (h): 293T Lysate: sc-114200, ECV304 cell lysate: sc-2269 or HUV-EC-C whole cell lysate: sc-364180.

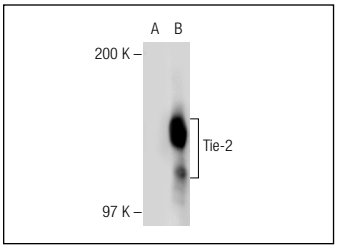
## RESEARCH USE

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

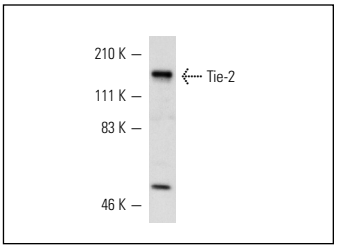
## STORAGE

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

## DATA




Tie-2 (C-20): sc-324. Western blot analysis of Tie-2 expression in non-transfected: sc-117752 (**A**) and human Tie-2 transfected: sc-114200 (**B**) 293T whole cell lysates.




Tie-2 (C-20): sc-324. Western blot analysis of Tie-2 expression in HUV-EC-C whole cell lysate.

## SELECT PRODUCT CITATIONS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3. Androutsellis-Theotokis, A., et al. 2010. Cholera toxin regulates a signaling pathway critical for the expansion of neural stem cell cultures from the fetal and adult rodent brains. PLoS ONE 5: e10841.
4. Ricciardi, C., et al. 2010. Development of microcantilever-based biosensor array to detect Angiopoietin-1, a marker of tumor angiogenesis. Biosens. Bioelectron. 25: 1193-1198.
5. Kato, K., et al. 2010. Endometrial cancer side-population cells show prominent migration and have a potential to differentiate into the mesenchymal cell lineage. Am. J. Pathol. 176: 381-392.
6. Liu, D., et al. 2010. Tie2/TEK modulates the interaction of glioma and brain tumor stem cells with endothelial cells and promotes an invasive phenotype. Oncotarget 1: 700-709.
7. Baker, A., et al. 2010. Experimental assessment of pro-lymphangiogenic growth factors in the treatment of post-surgical lymphedema following lymphadenectomy. Breast Cancer Res. 12: R70.
8. Youn, S.W., et al. 2011. COMP-Ang1 stimulates HIF-1α-mediated SDF-1 overexpression and recovers ischemic injury through BM-derived progenitor cell recruitment. Blood 117: 4376-4386.