SANTA CRUZ BIOTECHNOLOGY, INC.

Ang-2 (H-70): sc-20718

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Tie-1 and Tie-2 (also designated Tek) are novel cell surface receptor tyrosine kinases. The extracellular domain of Tie-1 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. Angiopoietin-1 (Ang-1) is a secreted ligand for Tie-2. Preliminary biochemical analyses of Ang-1 reveal a potential Fibrinogen-like domain at the carboxy-terminus and coiled-coil regions in the amino-terminus. Ang-1 is an angiogenic factor that is thought to be involved in endothelial development. A related protein, angiopoietin-2 (Ang-2), has been identified as a naturally occurring antagonist of Ang-1 activation of Tie-2. In adult tissue, Ang-2 expression seems to be restricted to sites of vascular remodeling.

REFERENCES

1. 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.
2. 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.
3. 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.
4. 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.
5. Davis, S., et al. 1996. Isolation of angiopoietin-1, a ligand for the Tie-2 receptor, by secretion-trap expression cloning. Cell 87: 1161-1169.

CHROMOSOMAL LOCATION

Genetic locus: ANGPT2 (human) mapping to 8p23.1; Angpt2 (mouse) mapping to 8 A1.3.

SOURCE

Ang-2 (H-70) is a rabbit polyclonal antibody raised against amino acids 171-240 mapping within an internal region of the mature chain of Ang-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG 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.

RESEARCH USE

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

APPLICATIONS

Ang-2 (H-70) is recommended for detection of precursor and mature Ang-2 of human and, to a lesser extent, mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

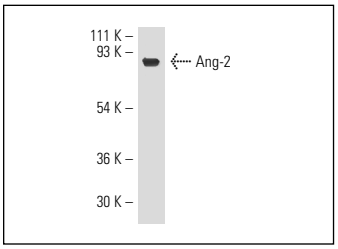
Ang-2 (H-70) is also recommended for detection of precursor and mature Ang-2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Ang-2 siRNA (h): sc-39305, Ang-2 siRNA (m): sc-39306, Ang-2 shRNA Plasmid (h): sc-39305-SH, Ang-2 shRNA Plasmid (m): sc-39306-SH, Ang-2 shRNA (h) Lentiviral Particles: sc-39305-V and Ang-2 shRNA (m) Lentiviral Particles: sc-39306-V.

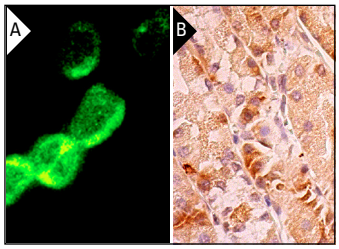
Molecular Weight of Ang-2: 62-70 kDa.

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, ECV304 cell lysate: sc-2269 or TF-1 cell lysate: sc-2412.

DATA



Ang-2 (H-70): sc-20718. Western blot analysis of Ang-2 expression in MM-142 whole cell lysate.



Ang-2 (H-70): sc-20718. Immunofluorescence staining of methanol-fixed HEL 92.1.7 cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human stomach tissue showing cytoplasmic staining of glandular cells (**B**).

SELECT PRODUCT CITATIONS

1. Morrissey, C., et al. 2008. Differential expression of angiogenesis associated genes in prostate cancer bone, liver and lymph node metastases. Clin. Exp. Metastasis 25: 377-388.
2. Inomata, M., et al. 2009. IL-4 alters expression patterns of storage components of vascular endothelial cell-specific granules through Stat6- and SOCS-1-dependent mechanisms. Mol. Immunol. 46: 2080-2089.