SANTA CRUZ BIOTECHNOLOGY, INC.

Ang-1 (C-19): sc-6320

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.

SOURCE

Ang-1 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Ang-1 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.

Blocking peptide available for competition studies, sc-6320 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ang-1 (C-19) is recommended for detection of precursor and mature Ang-1 and, to a lesser extent, Ang-2 and Ang-4 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).

Ang-1 (C-19) is also recommended for detection of precursor and mature Ang-1 and, to a lesser extent, Ang-2 and Ang-4 in additional species, including equine, canine, bovine, porcine and avian.

Molecular Weight of Ang-1: 60 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, A-375 cell lysate: sc-3811 or HeLa whole cell lysate: sc-2200.

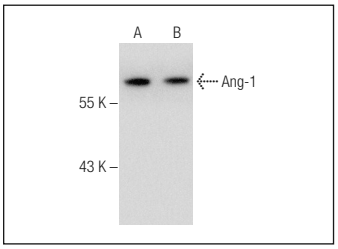
STORAGE

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

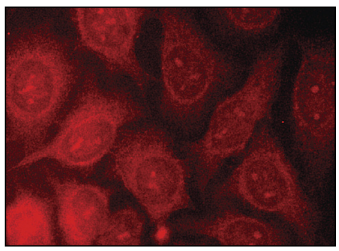
RESEARCH USE

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

DATA



Ang-1 (C-19): sc-6320. Western blot analysis of Ang-1 expression in HEL 92.1.7 (**A**) and A-375 (**B**) whole cell lysates.



Ang-1 (C-19): sc-6320. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

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2. Arsic, N., et al. 2003. Induction of functional neovascularization by combined VEGF and angiopoietin-1 gene transfer using AAV vectors. Mol. Ther. 7: 450-459.
3. Nakayama, T., et al. 2004. Mast cell-derived angiopoietin-1 plays a critical role in the growth of plasma cell tumors. J. Clin. Invest. 114: 1317-1325.
4. Goldman, J.M., et al. 2004. Methoxychlor-induced alterations in the histological expression of angiogenic factors in pituitary and uterus. J. Mol. Histol. 35: 363-375.
5. Tammela, T., et al. 2005. Angiopoietin-1 promotes lymphatic sprouting and hyperplasia. Blood 105: 4642-4648.
6. Hagen, A.S., et al. 2005. Placental expression of angiopoietin-1, angiopoietin-2 and tie-2 during placental development in an ovine model of placental insufficiency-fetal growth restriction. Pediatr. Res. 58: 1228-1232.
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