

Ang-1 (N-18): sc-6319

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.

CHROMOSOMAL LOCATION

Genetic locus: ANGPT1 (human) mapping to 8q23.1; Angpt1 (mouse) mapping to 15 B3.1.

SOURCE

Ang-1 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Ang-1 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6319 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ang-1 (N-18) is recommended for detection of Ang-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 (N-18) is also recommended for detection of Ang-1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Ang-1 siRNA (h): sc-39303, Ang-1 siRNA (m): sc-39304, Ang-1 shRNA Plasmid (h): sc-39303-SH, Ang-1 shRNA Plasmid (m): sc-39304-SH, Ang-1 shRNA (h) Lentiviral Particles: sc-39303-V and Ang-1 shRNA (m) Lentiviral Particles: sc-39304-V.

Molecular Weight of Ang-1: 60 kDa.

Positive Controls: ECV304 cell lysate: sc-2269 or HeLa whole cell lysate: sc-2200.

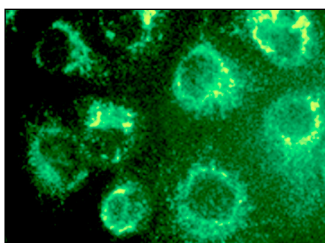
STORAGE

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 (N-18): sc-6319. Immunofluorescence staining of methanol-fixed ECV304 cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Sales, K.J., et al. 2002. Cyclooxygenase-1 is up-regulated in cervical carcinomas: autocrine/paracrine regulation of cyclooxygenase-2, prostaglandin ϵ receptors, and angiogenic factors by cyclooxygenase-1. *Cancer Res.* 62: 424-432.
- Blumenthal, R.D., et al. 2002. Abnormal expression of the angiopoietins and Tie receptors in menorrhagic endometrium. *Fertil. Steril.* 78: 1294-1300.
- Zeng, W., et al. 2008. The angiogenic makeup of human hepatocellular carcinoma does not favor vascular endothelial growth factor/angiopoietin-driven sprouting neovascularization. *Hepatology* 48: 1517-1527.
- Gérard, A.C., et al. 2008. Iodine deficiency induces a thyroid stimulating hormone-independent early phase of microvascular reshaping in the thyroid. *Am. J. Pathol.* 172: 748-760.
- Yoshizaki, A., et al. 2009. Expression patterns of angiopoietin-1, -2, and tie-2 receptor in ulcerative colitis support involvement of the angiopoietin/tie pathway in the progression of ulcerative colitis. *Dig. Dis. Sci.* 54: 2094-2099.
- De Spiegelaere, W., et al. 2010. Detection of hypoxia inducible factors and angiogenic growth factors during foetal endochondral and intramembranous ossification. *Anat. Histol. Embryol.* 39: 376-384.
- Gouw, A.S., et al. 2010. Molecular characterization of the vascular features of focal nodular hyperplasia and hepatocellular adenoma: a role for angiopoietin-1. *Hepatology* 52: 540-549.
- De Spiegelaere, W., et al. 2010. Expression and localization of angiogenic growth factors in developing porcine mesonephric glomeruli. *J. Histochem. Cytochem.* 58: 1045-1056.
- Andersen, S., et al. 2011. Prognostic impacts of angiopoietins in NSCLC tumor cells and stroma: VEGF-A impact is strongly associated with Ang-2. *PLoS ONE* 6: e19773.
- van der Veer, W.M., et al. 2011. Time course of the angiogenic response during normotrophic and hypertrophic scar formation in humans. *Wound Repair Regen.* 19: 292-301.