

Ang-2 (N-18): sc-7016

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: ANGPT2 (human) mapping to 8p23.1.

SOURCE

Ang-2 (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus 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.

Blocking peptide available for competition studies, sc-7016 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ang-2 (N-18) is recommended for detection of precursor and mature Ang-2 of 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-2 (N-18) is also recommended for detection of precursor and mature Ang-2 in additional species, including equine and porcine.

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

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

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, MIA PaCa-2 cell lysate: sc-2285 or HUV-EC-C whole cell lysate: sc-364180.

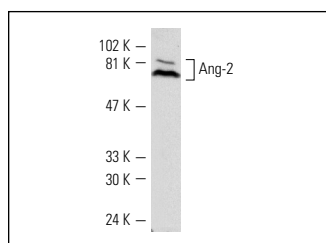
STORAGE

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

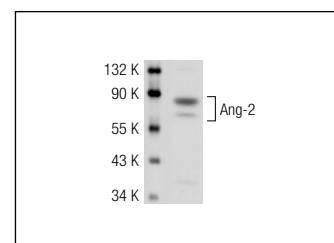
RESEARCH USE

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

DATA



Ang-2 (N-18): sc-7016. Western blot analysis of Ang-2 expression in HEL 92.1.7 whole cell lysate.



Ang-2 (N-18): sc-7016. Western blot analysis of Ang-2 expression in HUV-EC-C whole cell lysate.

SELECT PRODUCT CITATIONS

1. Tanaka, K., et al. 2002. Inhibition of infiltration and angiogenesis by Thrombospondin 1 in papillary thyroid carcinoma. *Clin. Cancer Res.* 8: 1125-1131.
2. Sales, K.J., et al. 2002. Cyclooxygenase-1 is up-regulated in cervical carcinomas: autocrine/paracrine regulation of cyclooxygenase-2, prostaglandin e receptors, and angiogenic factors by cyclooxygenase-1. *Cancer Res.* 62: 424-432.
3. Blumenthal, R.D., et al. 2002. Abnormal expression of the angiopoietins and Tie receptors in menorrhagic endometrium. *Fertil. Steril.* 78: 1294-1300.
4. Nakayama, T., et al. 2007. Expression of angiopoietin-1, 2 and 4 and Tie-1 and 2 in gastrointestinal stromal tumor, leiomyoma and schwannoma. *World J. Gastroenterol.* 13: 4473-4479.
5. Maffei, R., et al. 2007. Angiopoietin-2 expression in B-cell chronic lymphocytic leukemia: association with clinical outcome and immunoglobulin heavy-chain mutational status. *Leukemia* 21: 1312-1315.
6. Plaisier, M., et al. 2009. Decidual vascularization and the expression of angiogenic growth factors and proteases in first trimester spontaneous abortions. *Hum. Reprod.* 24: 185-197.
7. 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.
8. 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.
9. De Spiegelaere, W., et al. 2010. Expression and localization of angiogenic growth factors in developing porcine mesonephric glomeruli. *J. Histochem. Cytochem.* 58: 1045-1056.
10. Yanmei, Li., et al. 2010. Hepatitis B virus/hepatitis C virus upregulate angiopoietin-2 expression through mitogen-activated protein kinase pathway. *Hepatol. Res.* 40: 1022-1033.