

# Ang-2 (C-19): sc-7015

## 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/ANGPT1 (human) mapping to 8p23.1; Angpt2 (mouse) mapping to 8 A1.3, Angpt1 (mouse) mapping to 15 B3.1.

## SOURCE

Ang-2 (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-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-7015 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

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

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

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

Positive Controls: MIA PaCa-2 cell lysate: sc-2285, TF-1 cell lysate: sc-2412 or HUV-EC-C whole cell lysate: sc-364180.

## RESEARCH USE

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

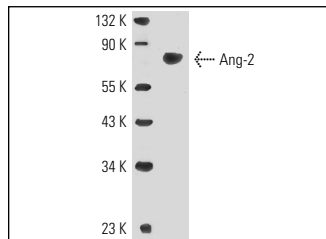
## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

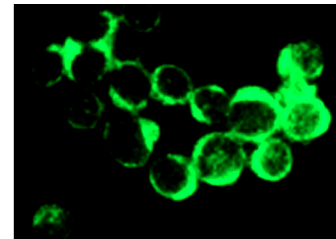
## STORAGE

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

## DATA



Ang-2 (C-19): sc-7015. Western blot analysis of human recombinant Ang-2.



Ang-2 (C-19): sc-7015. Immunofluorescence staining of methanol-fixed HEL 92.1.7 cells showing cytoplasmic localization.

## SELECT PRODUCT CITATIONS

- Bunone, G., et al. 1999. Expression of angiogenesis stimulators and inhibitors in human thyroid tumors and correlation with clinical pathological features. *Am. J. Pathol.* 155: 1967-1976.
- Guo, P., et al. 2005. Upregulation of angiopoietin-2, matrix metalloprotease-2, membrane type 1 metalloprotease, and Laminin-5γ2 correlates with the invasiveness of human glioma. *Am. J. Pathol.* 166: 877-890.
- 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.
- Hu, B., et al. 2006. Angiopoietin 2 induces glioma cell invasion by stimulating matrix metalloprotease 2 expression through the αvβ1 integrin and focal adhesion kinase signaling pathway. *Cancer Res.* 66: 775-783.
- Phelps, E.D., et al. 2006. Transcriptional and posttranscriptional regulation of angiopoietin-2 expression mediated by IGF and PDGF in vascular smooth muscle cells. *Am. J. Physiol., Cell Physiol.* 290: C352-C361.
- Massabeau, C., et al. 2009. Basic fibroblast growth factor-2/β3 integrin expression profile: signature of local progression after chemoradiotherapy for patients with locally advanced non-small-cell lung cancer. *Int. J. Radiat. Oncol. Biol. Phys.* 75: 696-702.
- Ma, Y., et al. 2010. Maternal obesity and overnutrition alter fetal growth rate and cotyledonary vascularity and angiogenic factor expression in the ewe. *Am. J. Physiol. Regul. Integr. Comp. Physiol.* 299: R249-R258.
- Maffei, R., et al. 2010. Increased angiogenesis induced by chronic lymphocytic leukemia B cells is mediated by leukemia-derived Ang2 and VEGF. *Leuk. Res.* 34: 312-321.
- Makinde, T.O. and Agrawal, D.K. 2011. Increased expression of angiopoietins and Tie2 in the lungs of chronic asthmatic mice. *Am. J. Respir. Cell Mol. Biol.* 44: 384-393.