

Ang (H-98): sc-8357

BACKGROUND

Angiopoietin-1 (Ang-1) is a secreted ligand for Tie-2, a cell surface receptor tyrosine kinase expressed in endothelial and hemopoietic cells. Ang-1 is glycosylated and has a fibrinogen-like domain at the carboxy terminus and coiled-coil regions in the amino terminus. Ang-1 is an angiogenic factor that mediates blood vessel maturation and may be involved in endothelial development. A related protein, angiopoietin-2 (Ang-2), is a naturally occurring antagonist of Ang-1 activation of Tie-2. In adult tissue, Ang-2 expression is restricted to sites of vascular remodeling. Ang-1 and Ang-2 are expressed in human malignant glioma. Ang-3 is a secretory protein expressed in adult human adrenal gland, placenta, lung, cultured human umbilical vein endothelial cells, thyroid gland, heart and small intestine. It acts as an antagonist. Ang-4 is expressed in heart and acts as an agonist.

REFERENCES

- 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.
- 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.
- 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.
- 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.
- Maisonpierre, P.C., et al. 1997. Angiopoietin-2, a natural antagonist for Tie-2 that disrupts *in vivo* angiogenesis. *Science* 277: 55-60.

SOURCE

Ang (H-98) is a rabbit polyclonal antibody raised against amino acids 400-498 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.

APPLICATIONS

Ang (H-98) is recommended for detection of Ang-1, 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), 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 (H-98) is also recommended for detection of Ang-1, Ang-2 and Ang-4 in additional species, including equine, canine, bovine, porcine and avian.

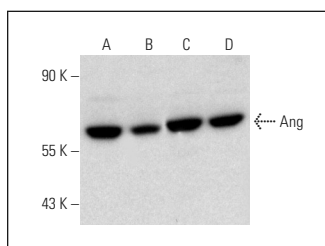
Molecular Weight of Ang: 70 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HEL 92.1.7 cell lysate: sc-2270 or K-562 whole cell lysate: sc-2203.

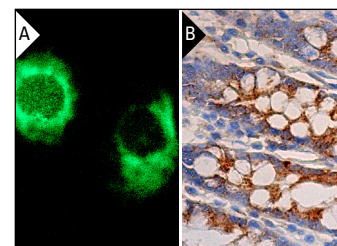
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

DATA



Ang (H-98): sc-8357. Western blot analysis of Ang expression in HeLa (A), HUV-EC-C (B), HEL 92.1.7 (C), K-562 (D) whole cell lysates.



Ang (H-98): sc-8357. Immunofluorescence staining of methanol-fixed ECV304 cells showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Dufourcq, P., et al. 2002. FrzA, a secreted frizzled related protein, induced angiogenic response. *Circulation* 106: 3097-3103.
- 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.
- Camós, S., et al. 2014. The high-mobility group I-Y transcription factor is involved in cerebral ischemia and modulates the expression of angiogenic proteins. *Neuroscience* 269: 112-130.

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.



Try **Ang-4 (A-6): sc-377497**, our highly recommended monoclonal alternative to Ang (H-98).