

ANG I (C-20): sc-1408

BACKGROUND

Angiogenesis is defined as the process of neovascularization and formation of new blood vessels from the established micro-circulation. Angiogenin (ANG or ANG I) is a non-glycosylated polypeptide, 123 amino acids in length, whose function is central to this process. ANG I shows a high degree of homology with known ribonucleases such as pancreatic ribonuclease A, and the capacity of ANG I to induce blood vessel growth is critically dependent on its ribonucleolytic activity. ANG I is thought to be involved in the development of solid tumors and ANG I antagonists are capable of inhibiting tumor growth. By a poorly understood mechanism, ANG I is endocytosed by sub-confluent endothelial cells and translocated to the nucleus where it accumulates in the nucleolus. The ANG I receptor has not yet been identified.

REFERENCES

1. Weremowicz, S., et al. 1989. Assignment of human angiogenin gene to chromosome 14q11-q13. *Cytogenet. Cell Genet.* 51: 1107.
2. Weremowicz, S., et al. 1990. Localization of the human angiogenin gene to chromosome band 14q11, proximal to the T cell receptor α/δ locus. *Am. J. Hum. Genet.* 47: 973-981.
3. Diaz-Flores, L., et al. 1994. Angiogenesis: an update. *Histol. Histopathol.* 9: 807-843.
4. Hu, G., et al. 1994. Angiogenin promotes invasiveness of cultured endothelial cells by stimulation of cell-associated proteolytic activities. *Proc. Natl. Acad. Sci. USA* 91: 12096-12100.
5. Reisdorf, C., et al. 1994. Proton resonance assignments and secondary structure of bovine angiogenin. *Eur. J. Biochem.* 224: 811-822.
6. Moroianu, J., et al. 1994. Identification of the nucleolar targeting signal of human angiogenin. *Biochem. Biophys. Res. Commun.* 203: 1765-1772.

CHROMOSOMAL LOCATION

Genetic locus: ANG (human) mapping to 14q11.2.

SOURCE

ANG I (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ANG I of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-1408 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

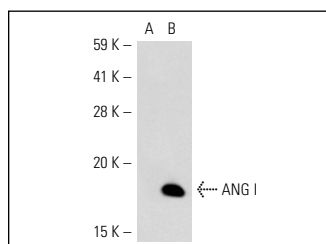
ANG I (C-20) is recommended for detection of precursor and mature ANG I of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution 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).

Suitable for use as control antibody for ANG I siRNA (h): sc-39291, ANG I shRNA Plasmid (h): sc-39291-SH and ANG I shRNA (h) Lentiviral Particles: sc-39291-V.

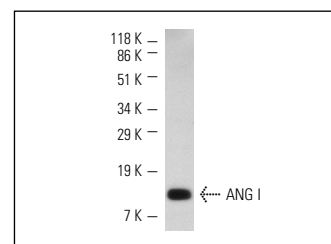
Molecular Weight of ANG I: 14 kDa.

Positive Controls: ANG I (h): CHO Lysate: sc-110020 or Hep G2 cell lysate: sc-2227.

DATA



ANG I (C-20): sc-1408. Western blot analysis of ANG I expression in non-transfected: sc-117750 (A) and human ANG I transfected: sc-110020 (B) CHO whole cell lysates.



ANG I (C-20): sc-1408. Western blot analysis of human recombinant ANG I.

SELECT PRODUCT CITATIONS

1. Rajashekhar, G., et al. 2002. Expression and localization of angiogenin in placenta: enhanced levels at term over first trimester villi. *Mol. Reprod. Dev.* 62: 159-166.
2. Fan, F., et al. 2004. Interleukin-1 β regulates angiopoietin-1 expression in human endothelial cells. *Cancer Res.* 64: 3186-3190.
3. Fu, H., et al. 2009. Stress induces tRNA cleavage by angiogenin in mammalian cells. *FEBS Lett.* 583: 437-442.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.