

ANG I (M-20): sc-1409

BACKGROUND

Angiogenesis is defined as the process of neovascularization and formation of new blood vessels from the established micro-circulation. Angiogenin, or ANG, is a non-glycosylated polypeptide, 123 amino acids in length, whose function is central to this process. Angiogenin shows a high degree of homology with known ribonucleases such as pancreatic ribonuclease A, and the capacity of angiogenin to induce blood vessel growth is critically dependent on its ribonucleolytic activity. Angiogenin is thought to be involved in the development of solid tumors, and angiogenin antagonists are capable of inhibiting tumor growth. By a poorly understood mechanism, angiogenin is endocytosed by subconfluent endothelial cells and translocated to the nucleus where it accumulates in the nucleolus. The angiogenin 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.
7. Olson, K.A., et al. 1995. Angiogenin antagonists prevent tumor growth *in vivo*. *Proc. Natl. Acad. Sci. USA* 92: 442-446.
8. Acharya, K.R., et al. 1995. Crystal structure of bovine angiogenin at 1.5-Å resolution. *Proc. Natl. Acad. Sci. USA* 92: 2949-2953.

SOURCE

ANG I (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of ANG I of mouse 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-1409 P, (100 µg 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.

APPLICATIONS

ANG I (M-20) is recommended for detection of precursor and mature ANG I, ANG III, ANG IV, RNase 1, RNase 4 and ANGRP of mouse and rat 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).

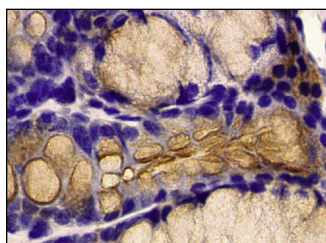
Molecular Weight of ANG I: 14 kDa.

Positive Controls: Mouse colon tissue extract, rat lung extract: sc-2396 or rat placenta tissue extract.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



ANG I (M-20): sc-1409. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse colon tissue showing extracellular localization.

RESEARCH USE

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