

RNH1 (S-14): sc-49703

BACKGROUND

RNH1, the placental ribonuclease (RNase) inhibitor, is an acidic 460-amino acid protein which contains an unusually high content of leucine and cysteine residues. It is a member of a family of proteinaceous cytoplasmic RNase inhibitors that are expressed in many tissues and bind to both intracellular and extracellular RNases in the cytosol. RNH1 binds to a diverse variety of mammalian RNases and holds them in a latent form. It is also important in the control of mRNA turnover. RNH1 inhibits angiogenesis by reversibly binding angiogenin, a member of the RNaseA superfamily. Because angiogenesis is necessary for the growth and metastasis of tumors, RNH1 may play an important role in cancer gene therapy.

REFERENCES

- Zhang, B., et al. 2002. Antitumor effect through human endostatin gene transfer in mice bearing B16 melanoma. *Zhonghua Zhong Liu Za Zhi* 24: 451-454.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 173320. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Chen, J.X., et al. 2005. Antitumor effects of human ribonuclease inhibitor gene transfected on B16 melanoma cells. *Int. J. Biochem. Cell Biol.* 37: 1219-1231.
- Dickson, K.A., et al. 2005. Ribonuclease inhibitor: structure and function. *Prog. Nucleic. Acid Res. Mol. Biol.* 80: 349-374.
- Fu, P., et al. 2005. Antitumor effect of hematopoietic cells carrying the gene of ribonuclease inhibitor. *Cancer Gene Ther.* 12: 268-275.
- Iyer, S., et al. 2005. Molecular recognition of human eosinophil-derived neurotoxin (RNase 2) by placental ribonuclease inhibitor. *J. Mol. Biol.* 347: 637-655.
- Kou, B., et al. 2005. Gene therapeutic exploration: retrovirus-mediated soluble vascular endothelial growth factor receptor-2 (sFLK-1) inhibits the tumorigenicity of S180, MCF-7, and B16 cells *in vivo*. *Oncol. Res.* 15: 239-247.
- Rutkoski, T.J., et al. 2005. Disruption of shape-complementarity markers to create cytotoxic variants of ribonuclease A. *J. Mol. Biol.* 354: 41-54.

CHROMOSOMAL LOCATION

Genetic locus: RNH1 (human) mapping to 11p15.5.

SOURCE

RNH1 (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of RNH1 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-49703 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RNH1 (S-14) is recommended for detection of RNH1 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).

Suitable for use as control antibody for RNH1 siRNA (h): sc-61365, RNH1 shRNA Plasmid (h): sc-61365-SH and RNH1 shRNA (h) Lentiviral Particles: sc-61365-V.

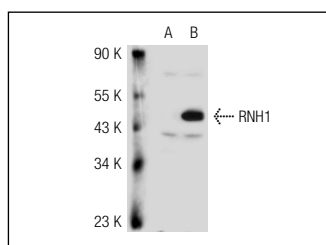
Molecular Weight of RNH1: 50 kDa.

Positive Controls: RNH1 (h): 293T Lysate: sc-116168.

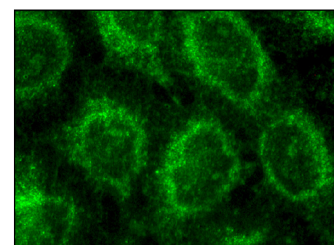
RECOMMENDED SECONDARY REAGENTS

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.

DATA



RNH1 (S-14): sc-49703. Western blot analysis of RNH1 expression in non-transfected (A) and human RNH1 transfected: sc-116168 (B) 293T whole cell lysates.



RNH1 (S-14): sc-49703. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

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.

PROTOCOLS

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