

RNH1 (C-1): sc-515561

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

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3. 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.
4. Dickson, K.A., et al. 2005. Ribonuclease inhibitor: structure and function. *Prog. Nucleic Acid Res. Mol. Biol.* 80: 349-374.
5. Fu, P., et al. 2005. Anti-tumor effect of hematopoietic cells carrying the gene of ribonuclease inhibitor. *Cancer Gene Ther.* 12: 268-275.
6. Iyer, S., et al. 2005. Molecular recognition of human eosinophil-derived neurotoxin (RNase 2) by placental ribonuclease inhibitor. *J. Mol. Biol.* 347: 637-655.
7. Kou, B., et al. 2005. Gene therapeutic exploration: retrovirus-mediated soluble vascular endothelial growth factor receptor-2 (sFLK-1) inhibits the tumorigenicity of S180, MCF7, and B16 cells *in vivo*. *Oncol. Res.* 15: 239-247.

CHROMOSOMAL LOCATION

Genetic locus: RNH1 (human) mapping to 11p15.5; Rnh1 (mouse) mapping to 7 F5.

SOURCE

RNH1 (C-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 427-443 at the C-terminus of RNH1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-515561 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

RNH1 (C-1) is recommended for detection of RNH1 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for RNH1 siRNA (h): sc-61365, RNH1 siRNA (m): sc-61366, RNH1 shRNA Plasmid (h): sc-61365-SH, RNH1 shRNA Plasmid (m): sc-61366-SH, RNH1 shRNA (h) Lentiviral Particles: sc-61365-V and RNH1 shRNA (m) Lentiviral Particles: sc-61366-V.

Molecular Weight of RNH1: 50 kDa.

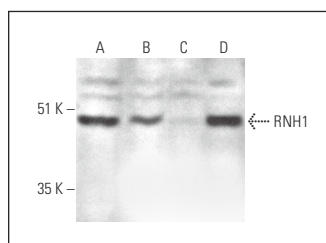
Positive Controls: NIH/3T3 whole cell lysate: sc-2210, RAW 264.7 whole cell lysate: sc-2211 or 3T3-L1 cell lysate: sc-2243.

RECOMMENDED SUPPORT REAGENTS

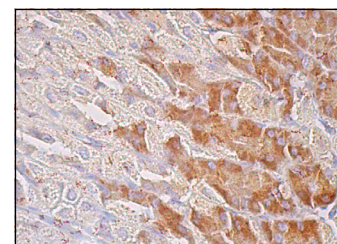
To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.
- 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



RNH1 (C-1): sc-515561. Western blot analysis of RNH1 expression in NIH/3T3 (A), 3T3-L1 (B), C6 (C) and RAW 264.7 (D) whole cell lysates. Note lack of reactivity with rat RNH1 in lane C.



RNH1 (C-1): sc-515561. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse stomach tissue showing cytoplasmic staining of glandular cells. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216.

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.