

RNH1 (C-10): sc-271725

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.

CHROMOSOMAL LOCATION

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

SOURCE

RNH1 (C-10) is a mouse monoclonal antibody raised against amino acids 157-456 mapping at the C-terminus of RNH1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RNH1 (C-10) is available conjugated to agarose (sc-271725 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271725 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271725 PE), fluorescein (sc-271725 FITC), Alexa Fluor® 488 (sc-271725 AF488), Alexa Fluor® 546 (sc-271725 AF546), Alexa Fluor® 594 (sc-271725 AF594) or Alexa Fluor® 647 (sc-271725 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271725 AF680) or Alexa Fluor® 790 (sc-271725 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

RNH1 (C-10) 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.

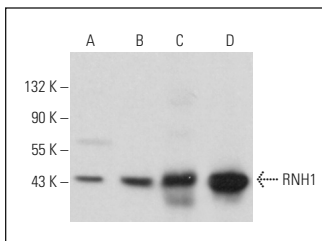
Molecular Weight of RNH1: 50 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Neuro-2A whole cell lysate: sc-364185 or 3T3-L1 cell lysate: sc-2243.

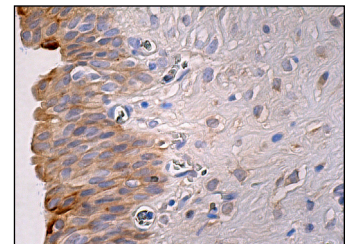
RECOMMENDED SUPPORT REAGENTS

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-10): sc-271725. Western blot analysis of RNH1 expression in HeLa (A), Neuro-2A (B), 3T3-L1 (C) and A-10 (D) whole cell lysates.



RNH1 (C-10): sc-271725. Immunoperoxidase staining of formalin fixed, paraffin-embedded human urinary bladder tissue showing cytoplasmic staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

- Bombaci, G., et al. 2022. LRR-protein RNH1 dampens the inflammasome activation and is associated with COVID-19 severity. *Life Sci. Alliance* 5: e202101226.

RESEARCH USE

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