

RNase L (2E9.2G5): sc-23955

BACKGROUND

RNase L encodes a component of the interferon-regulated 2-5A system that functions in the antiviral and antiproliferative roles of interferons. Mutations in this gene have been associated with predisposition to prostate cancer and this gene is a candidate for the hereditary prostate cancer 1 (HPC-1) allele. Interferon treatment enhances levels of both RNase L and a group of synthetases that produce 5'-triphosphorylated, 2',5'-oligoadenylates (2-5A) from ATP. The role of the 2-5A system in the control of viral and cellular growth suggests that defects in the 2-5A-dependent RNase gene could result in reduced immunity to virus infections and cancer.

REFERENCES

1. Wu, H., et al. 1998. Molecular cloning and expression of cDNA for human RNase H. *Antisense Nucleic Acid Drug Dev.* 8: 53-61.
2. Cerritelli, S., et al. 1998. Cloning, expression, and mapping of ribonucleases H of human and mouse related to bacterial RNase H1. *Genomics* 53: 300-307.
3. Demetree, E., et al. 2002. Ribonuclease L proteolysis in peripheral blood mononuclear cells of chronic fatigue syndrome patients. *J. Biol. Chem.* 277: 35746-35751.

CHROMOSOMAL LOCATION

Genetic locus: RNASEL (human) mapping to 1q25.3.

SOURCE

RNase L (2E9.2G5) is a mouse monoclonal antibody raised against purified recombinant human RNase L.

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.

RESEARCH USE

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

APPLICATIONS

RNase L (2E9.2G5) is recommended for detection of RNase L 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 immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for RNase L siRNA (h): sc-45965, RNase L shRNA Plasmid (h): sc-45965-SH and RNase L shRNA (h) Lentiviral Particles: sc-45965-V.

Molecular Weight of native RNase L: 83 kDa.

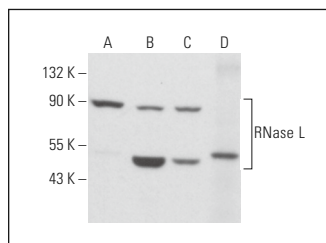
Molecular Weight of truncated RNase L: 37 kDa.

Positive Controls: DU 145 whole cell lysate: sc-2268, PC-3 whole cell lysate: sc-2220 or human liver extract: sc-363766.

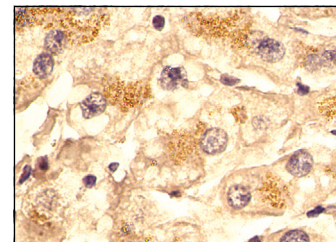
RECOMMENDED SUPPORT REAGENTS

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



RNase L (2E9.2G5): sc-23955. Western blot analysis of RNase L expression in PC-3 (A), F9 (B) and c4 (C) whole cell lysates and rat spleen tissue extract (D).



RNase L (2E9.2G5): sc-23955. Immunoperoxidase staining of formalin fixed, paraffin-embedded human liver tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Harashima, N., et al. 2014. Transfection of poly(I:C) can induce reactive oxygen species-triggered apoptosis and interferon-β-mediated growth arrest in human renal cell carcinoma cells via innate adjuvant receptors and the 2-5A system. *Mol. Cancer* 13: 217.
2. Carey, C.M., et al. 2019. Recurrent loss-of-function mutations reveal costs to OAS1 antiviral activity in primates. *Cell Host Microbe* 25: 336-343.

STORAGE

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

PROTOCOLS

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