

mrnp41 (N-17): sc-74893

BACKGROUND

Mrnp41 (mRNA-binding protein, 41-KD), also known as Rae1 protein homolog and mRNA export factor, is a 368 amino acid protein that binds mRNA and is involved in nucleocytoplasmic transport. Though characterized in both the nucleus and cytoplasm, mrnp41 is primarily localized to the nuclear pore complex in the nuclear envelope. Mutations in mrnp41 may result in the accumulation of poly(A)-containing mRNA in the nucleus, further supporting the role of mrnp41 as a primary nuclear exporter of mRNA. Along with Nup98, mrnp41 has been shown to regulate E-cadherin, an activating subunit of the anaphase-promoting complex complex, which results in the prevention of securin degradation, therefore suggesting that mrnp41 may play a potential role in maintaining euploidy. Also, during mitosis, both mrnp41 and NuMA have been shown to be required for bipolar spindle formation.

REFERENCES

1. Bharathi, A., Ghosh, A., Whalen, W.A., Yoon, J.H., Pu, R., Dasso, M. and Dhar, R. 1997. The human RAE1 gene is a functional homologue of *Schizosaccharomyces pombe* rae1 gene involved in nuclear export of Poly^A RNA. *Gene* 198: 251-258.
2. Kraemer, D. and Blobel, G. 1997. mRNA binding protein mrnp41 localizes to both nucleus and cytoplasm. *Proc. Natl. Acad. Sci. USA* 94: 9119-9124.
3. Kraemer, D., Dresbach, T. and Drenckhahn, D. 2001. Mrnp41 (Rae 1p) associates with microtubules in HeLa cells and in neurons. *Eur. J. Cell Biol.* 80: 733-740.
4. Zenklusen, D. and Stutz, F. 2001. Nuclear export of mRNA. *FEBS Lett.* 498: 150-156.

CHROMOSOMAL LOCATION

Genetic locus: RAE1 (human) mapping to 20q13.31; Rae1 (mouse) mapping to 2 H3.

SOURCE

mrnp41 (N-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the N-terminus of mrnp41 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-74893 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.

PROTOCOLS

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

APPLICATIONS

mrnp41 (N-17) is recommended for detection of mrnp41 of mouse, rat and 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).

mrnp41 (N-17) is also recommended for detection of mrnp41 in additional species, including equine, canine and porcine.

Suitable for use as control antibody for mrnp41 siRNA (h): sc-75825, mrnp41 siRNA (m): sc-75826, mrnp41 shRNA Plasmid (h): sc-75825-SH, mrnp41 shRNA Plasmid (m): sc-75826-SH, mrnp41 shRNA (h) Lentiviral Particles: sc-75825-V and mrnp41 shRNA (m) Lentiviral Particles: sc-75826-V.

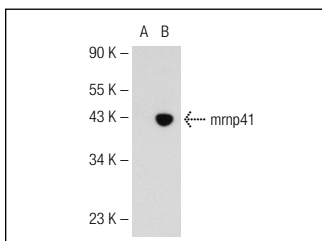
Molecular Weight of mrnp41: 43 kDa.

Positive Controls: mrnp41 (h): 293T Lysate: sc-111781.

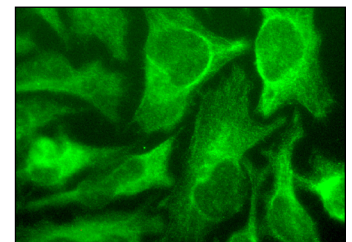
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



mrnp41 (N-17): sc-74893. Western blot analysis of mrnp41 expression in non-transfected: sc-117752 (A) and human mrnp41 transfected: sc-111781 (B) 293T whole cell lysates.



mrnp41 (N-17): sc-74893. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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

MONOS
Satisfaction
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Try **mrnp41 (G-3): sc-393625** or **mrnp41 (A-9): sc-393624**, our highly recommended monoclonal alternatives to mrnp41 (N-17).