

RRP9 (h): 293T Lysate: sc-174103

BACKGROUND

RRP9 (ribosomal RNA processing 9), also known as small subunit (SSU) processome component, RNU3IP2 or U355K, is a 475 amino acid nucleolar protein that belongs to the WD repeat RRP9 family. One of several components of a small nucleolar ribonucleoprotein particle (snoRNP), RRP9 is thought to be involved in the modification and processing of precursor rRNA (ribosomal RNA). Specifically, RRP9 interacts with the U3 snoRNA complex and binds a fragment of the complex that contains a box B/C motif and is known as 3UBC. The association of RRP9 with 3UBC is dependent upon two factors: binding of an snRNP protein known as NHPX to the B/C motif and a conserved tertiary structure that flanks the B/C motif. If the NHPK protein is bound and the conserved structure is present, RRP9 can interact with 3UBC and participate in pre-rRNA processing. RRP9 contains seven WD repeats that are necessary for both its nucleolar localization and its ability to bind U3 snoRNA.

REFERENCES

1. Pluk, H., et al. 1998. cDNA cloning and characterization of the human U3 small nucleolar ribonucleoprotein complex-associated 55-kilodalton protein. *Mol. Cell. Biol.* 18: 488-498.
2. Venema, J., et al. 2000. Yeast RRP9p is an evolutionarily conserved U3 snoRNP protein essential for early pre-rRNA processing cleavages and requires box C for its association. *RNA* 6: 1660-1671.
3. Lukowiak, A.A., et al. 2000. Interaction of the U3-55k protein with U3 snoRNA is mediated by the box B/C motif of U3 and the WD repeats of U3-55k. *Nucleic Acids Res.* 28: 3462-3471.
4. Granneman, S., et al. 2002. The hU3-55K protein requires 15.5K binding to the box B/C motif as well as flanking RNA elements for its association with the U3 small nucleolar RNA *in vitro*. *J. Biol. Chem.* 277: 48490-48500.
5. Grandi, P., et al. 2002. 90S pre-ribosomes include the 35S pre-rRNA, the U3 snoRNP, and 40S subunit processing factors but predominantly lack 60S synthesis factors. *Mol. Cell* 10: 105-115.
6. Marmier-Gourrier, N., et al. 2003. A structural, phylogenetic, and functional study of 15.5-kD/Snu13 protein binding on U3 small nucleolar RNA. *RNA* 9: 821-838.
7. Watkins, N.J., et al. 2004. Assembly and maturation of the U3 snoRNP in the nucleoplasm in a large dynamic multiprotein complex. *Mol. Cell* 16: 789-798.
8. Andersen, J.S., et al. 2005. Nucleolar proteome dynamics. *Nature* 433: 77-83.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: RRP9 (human) mapping to 3p21.2.

PRODUCT

RRP9 (h): 293T Lysate represents a lysate of human RRP9 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

RRP9 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive RRP9 antibodies. Recommended use: 10-20 µl per lane.

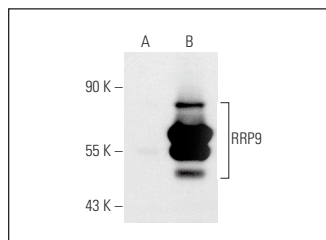
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RRP9 (RS-9): sc-100592 is recommended as a positive control antibody for Western Blot analysis of enhanced human RRP9 expression in RRP9 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

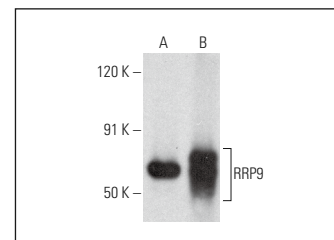
RECOMMENDED SUPPORT REAGENTS

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.

DATA



RRP9 (RS-9): sc-100592. Western blot analysis of RRP9 expression in non-transfected: sc-117752 (A) and human RRP9 transfected: sc-174103 (B) 293T whole cell lysates.



RRP9 (C-7): sc-515661. Western blot analysis of RRP9 expression in non-transfected: sc-117752 (A) and human RRP9 transfected: sc-174103 (B) 293T whole cell lysates.

RESEARCH USE

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