SANTA CRUZ BIOTECHNOLOGY, INC.

RRP9 (E-19): sc-103173

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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.

CHROMOSOMAL LOCATION

Genetic locus: RRP9 (human) mapping to 3p21.2; Rrp9 (mouse) mapping to 9 F1.

SOURCE

RRP9 (E-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of RRP9 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103173 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RRP9 (E-19) is recommended for detection of RRP9 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); non cross-reactive with other RRP family members.

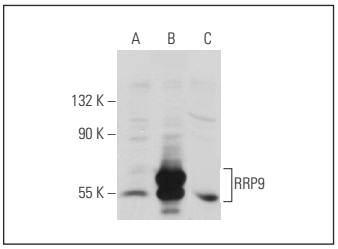
RRP9 (E-19) is also recommended for detection of RRP9 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for RRP9 siRNA (h): sc-78299, RRP9 siRNA (m): sc-153133, RRP9 shRNA Plasmid (h): sc-78299-SH, RRP9 shRNA Plasmid (m): sc-153133-SH, RRP9 shRNA (h) Lentiviral Particles: sc-78299-V and RRP9 shRNA (m) Lentiviral Particles: sc-153133-V.

Molecular Weight of RRP9: 52 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132 or RRP9 (h): 293T Lysate: sc-174103.

DATA



RRP9 (E-19): sc-103173. Western blot analysis of RRP9 expression in non-transfected: sc-117752 (**A**) and human RRP9 transfected: sc-174103 (**B**) 293T whole cell lysates and Jurkat nuclear extract (**C**).

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.

PROTOCOLS

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