SANTA CRUZ BIOTECHNOLOGY, INC.

RRP9 (C-7): sc-515661

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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.

CHROMOSOMAL LOCATION

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

SOURCE

RRP9 (C-7) is a mouse monoclonal antibody raised against amino acids 271-370 mapping within an internal region of RRP9 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RRP9 (C-7) is available conjugated to agarose (sc-515661 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515661 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515661 PE), fluorescein (sc-515661 FITC), Alexa Fluor® 488 (sc-515661 AF488), Alexa Fluor® 546 (sc-515661 AF546), Alexa Fluor® 594 (sc-515661 AF594) or Alexa Fluor® 647 (sc-515661 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-515661 AF680) or Alexa Fluor® 790 (sc-515661 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

RRP9 (C-7) is recommended for detection of RRP9 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

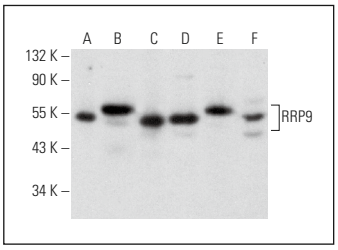
Molecular Weight of RRP9: 52 kDa.

Positive Controls: Y79 cell lysate: sc-2240, NRK whole cell lysate: sc-364197 or NIH/3T3 whole cell lysate: sc-2210.

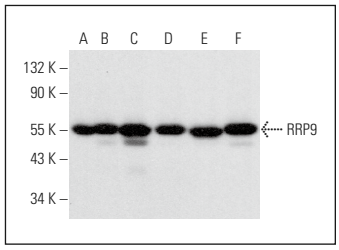
RECOMMENDED SUPPORT REAGENTS

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.

DATA



RRP9 (C-7): sc-515661. Western blot analysis of RRP9 expression in NRK (**A**), M1 (**B**), MTE1D (**C**), NIH/3T3 (**D**) and SP2/0 (**E**) whole cell lysates and rat testis tissue extract (**F**).



RRP9 (C-7): sc-515661. Western blot analysis of RRP9 expression in Y79 (**A**), c4 (**B**), MM-142 (**C**), F9 (**D**), NCI-H929 (**E**) and WEHI-231 (**F**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yasuhara, T., et al. 2022. Condensates induced by transcription inhibition localize active chromatin to nucleoli. Mol. Cell 82: 2738-2753.e6.

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.