SANTA CRUZ BIOTECHNOLOGY, INC.

PRP6 (N-20): sc-13253

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The Power to Question

BACKGROUND

Assembly of pre-mRNA splicsosomes requires the interaction between snRNPs U4/U6 and U5 to form the [U4/U6.U5] tri-snRNP. In yeast, the small nuclear ribonucleoprotein-associating protein PRP6p is necessary for the accumulation of the [U4/Ug.U5] tri-snRNP. Yeast PRP6p is uniquely located in discrete subnuclear regions, similar to the subnuclear localization of mammalian splicing components. Isolated from HeLa nuclear extract, mammalian PRP6 shares conserved tetrarico peptide repeats with yeast PRP6p, making PRP6 the mammalian homolog of yeast PRP6p. In contrast to yeast PRP6p, which is specific for U4/U6, the human PRP6 interacts within the tri-snRNP with both the U5 and the U4/U6 snRNPs via protein-protein interactions, thus providing a bridge that connects the two snRNP particles.

REFERENCES

1. Abovich, N., et al. 1990. The yeast PRP6 gene encodes a U4/U6 small nuclear ribonucleoprotein particle (snRNP), and the PRP9 gene encodes a protein required for U2 snRNP binding. Mol. Cell. Biol. 10: 6417-6425.
2. Blanton, S., et al. 1992. PRP38 encodes a yeast protein required for pre-mRNA splicing and maintenance of stable U6 small nuclear RNA levels. Mol. Cell. Biol. 12: 3939-3947.
3. Elliott, D.J., et al. 1992. A yeast splicing factor is localized in discrete subnuclear domains. EMBO J. 11: 3731-3736.
4. Galisson, F., et al. 1993. The biochemical defects of PRP4-1 and PRP6-1 yeast splicing mutants reveal that the PRP6 protein is required for the accumulation of the [U4/Ug.U5] tri-snRNP. Nucleic Acids Res. 21: 1555-1562.
5. Makarov, E.M., et al. 2000. The human homologue of the yeast splicing factor PRP6p contains multiple TPR elements and is stably associated with the U5 snRNP via protein-protein interactions. J. Mol. Biol. 298: 567-575.

CHROMOSOMAL LOCATION

Genetic locus: PRPF6 (human) mapping to 20q13.33; Prpf6 (mouse) mapping to 2 H4.

SOURCE

PRP6 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of PRP6 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-13253 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13253 X, 200 µg/0.1 ml.

STORAGE

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

APPLICATIONS

PRP6 (N-20) is recommended for detection of PRP6 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).

PRP6 (N-20) is also recommended for detection of PRP6 in additional species, including canine, bovine, porcine and avian.

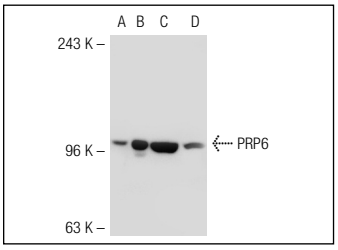
Suitable for use as control antibody for PRP6 siRNA (h): sc-38207, PRP6 siRNA (m): sc-38208, PRP6 shRNA Plasmid (h): sc-38207-SH, PRP6 shRNA Plasmid (m): sc-38208-SH, PRP6 shRNA (h) Lentiviral Particles: sc-38207-V and PRP6 shRNA (m) Lentiviral Particles: sc-38208-V.

PRP6 (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of PRP6: 102 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, PRP6 (m): 293T Lysate: sc-127391 or HL-60 nuclear extract: sc-2147.

DATA



PRP6 (N-20): sc-13253. Western blot analysis of PRP6 expression in non-transfected: sc-117752 (**A**) and mouse PRP6 transfected: sc-127391 (**B**) 293T whole cell lysates and K-562 (**C**) and HL-60 (**D**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Bonaccorsi, L., et al. 2004. EGF receptor (EGFR) signaling promoting invasion is disrupted in androgen-sensitive prostate cancer cells by an interaction between EGFR and androgen receptor (AR). Int. J. Cancer 112: 78-86.
2. Batsché, E., et al. 2006. The human SWI/SNF subunit Brm is a regulator of alternative splicing. Nat. Struct. Mol. Biol. 13: 22-29.

RESEARCH USE

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