SANTA CRUZ BIOTECHNOLOGY, INC.

PRPF31 (H-250): sc-68347

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The Power to Question

BACKGROUND

PRPF31 (PRP31 pre-mRNA processing factor 31 homolog), also known as RP11, PRP31 or NY-BR-99, is a ubiquitously expressed protein that localizes to the nucleus and is found in Cajal bodies and speckles. PRPF31 is involved in pre-mRNA splicing and functions as a component of the U4/U6.U5 tri-snRNP (small nuclear ribonucleoprotein) complex. More specifically, PRPF31 is believed to mediate the tethering of the tri-snRNP to the spliceosome (a large ribonucleoprotien responsible for catalyzing the splicing of pre-mRNA), thereby assisting in the assembly of the mature spliceosome. Mutations in the gene encoding PRPF31 result in autosomal dominant retinitis pigmentosa type 11 (RP11), which leads to photoreceptor cell degeneration. RP11 patients initially exhibit a loss of their midperipheral visual field as well as night vision blindness. The disease eventually progresses to the loss of far peripheral visual field and finally the loss of central vision. This suggests that PRPF31 is a key player in the pre-mRNA splicing of photoreceptor-specific genes.

REFERENCES

1. Deery, E.C., et al. 2002. Disease mechanism for retinitis pigmentosa (RP11) caused by mutations in the splicing factor gene PRPF31. Hum. Mol. Genet. 11: 3209-3219.
2. Schaffert, N., et al. 2004. RNAi knockdown of hPrp 31 leads to an accumulation of U4/U6 di-snRNPs in Cajal bodies. EMBO J. 23: 3000-3009.
3. Yuan, L., et al. 2005. Mutations in PRPF31 inhibit pre-mRNA splicing of rhodopsin gene and cause apoptosis of retinal cells. J. Neurosci. 25: 748-757.
4. Gandra, M., et al. 2005. Gene symbol: PRPF31. Disease: retinitis pigmentosa—autosomal dominant. Hum. Genet. 118: 548-548.
5. Wilkie, S.E., et al. 2006. A study of the nuclear trafficking of the splicing factor protein PRPF31 linked to autosomal dominant retinitis pigmentosa (ADRP). Biochim. Biophys. Acta 1762: 304-311.
6. Rivolta, C., et al. 2006. Variation in retinitis pigmentosa-11 (PRPF31 or RP11) gene expression between symptomatic and asymptomatic patients with dominant RP11 mutations. Hum. Mutat. 27: 644-653.

CHROMOSOMAL LOCATION

Genetic locus: PRPF31 (human) mapping to 19q13.42; Prpf31 (mouse) mapping to 7 A1.

SOURCE

PRPF31 (H-250) is a rabbit polyclonal antibody raised against amino acids 81-330 mapping within an internal region of PRPF31 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.

RESEARCH USE

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

APPLICATIONS

PRPF31 (H-250) is recommended for detection of PRPF31 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).

PRPF31 (H-250) is also recommended for detection of PRPF31 in additional species, including equine, canine, bovine and porcine.

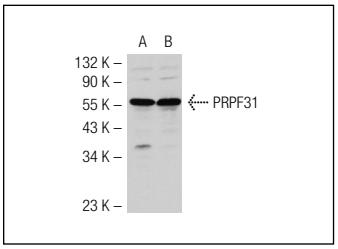
Suitable for use as control antibody for PRPF31 siRNA (h): sc-62892, PRPF31 siRNA (m): sc-62893, PRPF31 shRNA Plasmid (h): sc-62892-SH, PRPF31 shRNA Plasmid (m): sc-62893-SH, PRPF31 shRNA (h) Lentiviral Particles: sc-62892-V and PRPF31 shRNA (m) Lentiviral Particles: sc-62893-V.

Molecular Weight of PRPF31: 61 kDa.

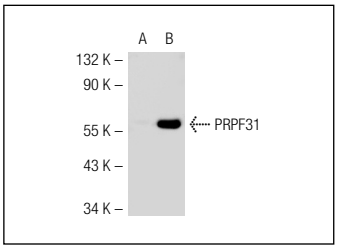
RECOMMENDED SECONDARY REAGENTS

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



PRPF31 (H-250): sc-68347. Western blot analysis of PRPF31 expression in JAR (**A**) and JEG-3 (**B**) whole cell lysates.



PRPF31 (H-250): sc-68347. Western blot analysis of PRPF31 expression in non-transfected: sc-117752 (**A**) and mouse PRPF31 transfected: sc-127396 (**B**) 293T whole cell lysates.

STORAGE

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

MONOS Satisfaction Guaranteed

Try **PRPF31 (A-6): sc-166792**, our highly recommended monoclonal alternative to PRPF31 (H-250).