

# Rpp21 (N-15): sc-169217

## BACKGROUND

Ribonuclease P (RNase P) and Ribonuclease MRP (RNase MRP) are small nuclear ribonucleoproteins (snRNPs) that act on RNA substrates *in vitro*. RNase P and RNase MRP, which accumulate in the nucleolus, have a similar RNA component and also have several protein subunits in common. RNase P, which consists of a complex of an RNA species, POP1, POP5, and at least seven Rpps, removes the 5' leader sequences from precursor tRNA molecules. Rpp21 (ribonuclease P/MRP 21kDa subunit), also known as CAT60 or ribonucleoprotein V, is a 154 amino acid nuclear protein that functions as a component of RNase P. Existing as three alternatively spliced isoforms, Rpp21 is encoded by a gene that maps to human chromosome 6p22.1 and mouse chromosome 17 B1.

## REFERENCES

- Jarrous, N., et al. 1998. Autoantigenic properties of some protein subunits of catalytically active complexes of human ribonuclease P. *RNA* 4: 407-417.
- van Eenennaam, H., et al. 2000. Architecture and function of the human endonucleases RNase P and RNase MRP. *IUBMB Life* 49: 265-272.
- van Eenennaam, H., et al. 2001. Basic domains target protein subunits of the RNase MRP complex to the nucleolus independently of complex association. *Mol. Biol. Cell* 12: 3680-3689.
- Jiang, T., et al. 2001. Protein-RNA interactions in the subunits of human nuclear RNase P. *RNA* 7: 937-941.
- Jarrous, N., et al. 2001. Function and subnuclear distribution of Rpp21, a protein subunit of the human ribonucleoprotein ribonuclease P. *RNA* 7: 1153-1164.
- Welting, T.J., et al. 2004. Mutual interactions between subunits of the human RNase MRP ribonucleoprotein complex. *Nucleic Acids Res.* 32: 2138-2146.

## CHROMOSOMAL LOCATION

Genetic locus: RPP21 (human) mapping to 6p22.1; Rpp21 (mouse) mapping to 17 B1.

## SOURCE

Rpp21 (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Rpp21 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-169217 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

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

## APPLICATIONS

Rpp21 (N-15) is recommended for detection of Rpp21 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 Rpp family members.

Rpp21 (N-15) is also recommended for detection of Rpp21 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for Rpp21 siRNA (h): sc-95356, Rpp21 siRNA (m): sc-153111, Rpp21 shRNA Plasmid (h): sc-95356-SH, Rpp21 shRNA Plasmid (m): sc-153111-SH, Rpp21 shRNA (h) Lentiviral Particles: sc-95356-V and Rpp21 shRNA (m) Lentiviral Particles: sc-153111-V.

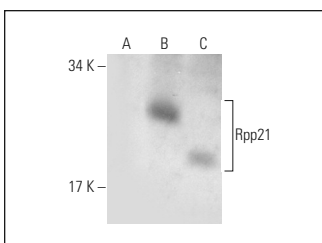
Molecular Weight of Rpp21 isoforms: 18/20/17 kDa.

Positive Controls: Rpp21 (h): 293T Lysate: sc-371497 or MCF7 whole cell lysate: sc-2206.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## DATA



Rpp21 (N-15): sc-169217. Western blot analysis of Rpp21 expression in non-transfected 293T: sc-117752 (A), human Rpp21 transfected 293T: sc-371497 (B) and MCF7 (C) whole cell lysates.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.