

# Rpp30 (2931D5a): sc-81374

## 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 (H1 RNA), POP1 (Processing of Precursor 1), POP5 (Processing of Precursor 5), and at least seven Rpps (including Rpp14, Rpp29, Rpp30 and Rpp38), removes the 5' leader sequences from precursor tRNA molecules. In particular, the nucleolar-localizing RNase P catalyzes the hydrolysis of a specific phosphodiester bond in precursor tRNA to form the mature 5' end of tRNA. The structurally related RNase MRP plays an essential role in the formation of the 5' end of 5.8S rRNA. Both RNase P and RNase MRP are associated with Th/To ribonucleoproteins; Rpp30 and Rpp38 have specifically been implicated as Th autoantigens which contribute to the autoimmune disease systemic sclerosis.

## REFERENCES

1. Karwan, R. 1993. RNase MRP/RNase P: a structure-function relation conserved in evolution? FEBS Lett. 319: 1-4.
2. Jarrous, N., Eder, P.S., Guerrier-Takada, C., Hoog, C. and Altman, S. 1998. Autoantigenic properties of some protein subunits of catalytically active complexes of human ribonuclease P. RNA 4: 407-417.
3. Pluk, H., van Eenennaam, H., Rutjes, S.A., Pruijn, G.J. and van Venrooij, W.J. 1999. RNA-protein interactions in the human RNase MRP ribonucleoprotein complex. RNA 5: 512-524.
4. van Eenennaam, H., Jarrous, N., van Venrooij, W.J. and Pruijn, G.J. 2000. Architecture and function of the human endonucleases RNase P and RNase MRP. IUBMB Life 49: 265-272.
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6. Kurz, J.C. and Fierke, C.A. 2000. Ribonuclease P: a ribonucleoprotein enzyme. Curr. Opin. Chem. Biol. 4: 553-558.
7. van Eenennaam, H., van der Heijden, A., Janssen, R.J., van Venrooij, W.J. and Pruijn, G.J. 2001. Basic domains target protein subunits of the RNase MRP complex to the nucleolus independently of complex association. Mol. Biol. Cell. 12: 3680-3689.

## CHROMOSOMAL LOCATION

Genetic locus: RPP30 (human) mapping to 10q23.31; Rpp30 (mouse) mapping to 19 C2.

## SOURCE

Rpp30 (2931D5a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to the C-terminal region of Rpp30 of human origin.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## PRODUCT

Each vial contains 100 µg IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% stabilizer protein.

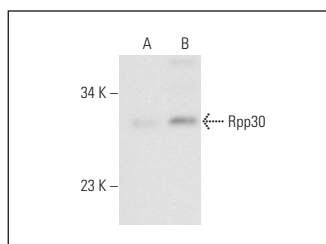
## APPLICATIONS

Rpp30 (2931D5a) is recommended for detection of Rpp30 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

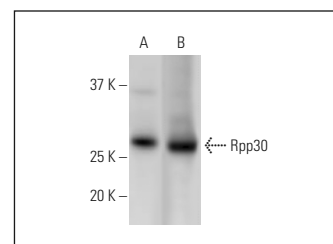
Suitable for use as control antibody for Rpp30 siRNA (h): sc-38352, Rpp30 siRNA (m): sc-38353, Rpp30 shRNA Plasmid (h): sc-38352-SH, Rpp30 shRNA Plasmid (m): sc-38353-SH, Rpp30 shRNA (h) Lentiviral Particles: sc-38352-V and Rpp30 shRNA (m) Lentiviral Particles: sc-38353-V.

Positive Controls: Rpp30 (h): 293T Lysate: sc-174755, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

## DATA



Rpp30 (2931D5a): sc-81374. Western blot analysis of Rpp30 expression in non-transfected: sc-117752 (A) and human Rpp30 transfected: sc-174755 (B) 293T whole cell lysates.



Rpp30 (2931D5a): sc-81374. Western Blot analysis of Rpp30 expression in HeLa (A) and NIH/3T3 (B) 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) for detailed protocols and support products.