

Rpp29 (N-14): sc-23048

BACKGROUND

Ribonuclease P (PNase 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 7 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

- Karwan, R. 1993. RNase MRP/RNase P: a structure-function relation conserved in evolution? FEBS Lett. 319: 1-4.
- 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.
- 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.
- Altman, S. 2000. The road to RNase P. Nat. Struct. Biol. 7: 827-828.
- Kurz, J.C. and Fierke, C.A. 2000. Ribonuclease P: a ribonucleoprotein enzyme. Curr. Opin. Chem. Biol. 4: 553-558.
- 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.
- 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: POP4 (human) mapping to 19q12; Pop4 (mouse) mapping to 7 B1.

SOURCE

Rpp29 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Rpp29 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-23048 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rpp29 (N-14) is recommended for detection of Rpp29 of 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).

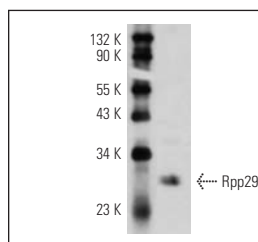
Molecular Weight of Rpp29: 30 kDa.

Positive Controls: MCF7 whole cell lysate: sc-2206.

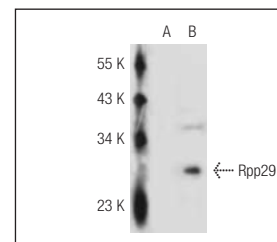
RECOMMENDED SECONDARY REAGENTS

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



Rpp29 (N-14): sc-23048. Western blot analysis of Rpp29 expression in MCF7 whole cell lysate.



Rpp29 (N-14): sc-23048. Western blot analysis of Rpp29 expression in non-transfected: sc-117752 (A) and human Rpp29 transfected: sc-111698 (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.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.