SANTA CRUZ BIOTECHNOLOGY, INC.

Rpp38 (B-6): sc-398113

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 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., et al. 1998. Autoantigenic properties of some protein subunits of catalytically active complexes of human ribonuclease P. RNA 4: 407-417.
3. Pluk, H., et al. 1999. RNA-protein interactions in the human RNase MRP ribonucleoprotein complex. RNA 5: 512-524.
4. Altman, S. 2000. The road to RNase P. Nat. Struct. Biol. 7: 827-828.
5. Kurz, J.C. and Fierke, C.A. 2000. Ribonuclease P: a ribonucleoprotein enzyme. Curr. Opin. Chem. Biol. 4: 553-558.
6. van Eenennaam, H., et al. 2000. Architecture and function of the human endonucleases RNase P and RNase MRP. IUBMB Life 49: 265-272.
7. 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.

CHROMOSOMAL LOCATION

Genetic locus: RPP38 (human) mapping to 10p13.

SOURCE

Rpp38 (B-6) is a mouse monoclonal antibody raised against amino acids 205-246 mapping near the C-terminus of Rpp38 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

Rpp38 (B-6) is recommended for detection of Rpp38 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Rpp38 siRNA (h): sc-106729, Rpp38 shRNA Plasmid (h): sc-106729-SH and Rpp38 shRNA (h) Lentiviral Particles: sc-106729-V.

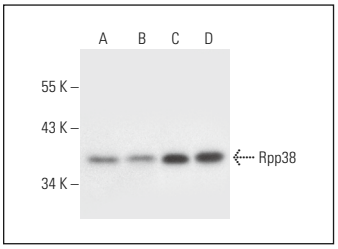
Molecular Weight of Rpp38: 38-40 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227, HeLa whole cell lysate: sc-2200 or PC-3 cell lysate: sc-2220.

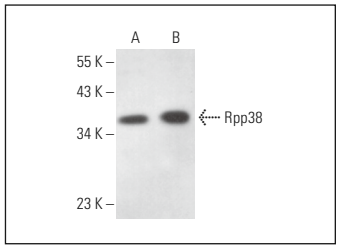
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Rpp38 (B-6): sc-398113. Western blot analysis of Rpp38 expression in Hep G2 (**A**), PC-3 (**B**), K-562 (**C**) and HeLa (**D**) whole cell lysates.



Rpp38 (B-6): sc-398113. Western blot analysis of Rpp38 expression in K-562 (**A**) and MCF7 (**B**) nuclear extracts.

RESEARCH USE

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

PROTOCOLS

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