

Rpp20 (D-6): sc-514903

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, remove the 5' leader sequences from precursor tRNA molecules. Rpp20 (ribonuclease P protein subunit p20), also known as POP7 (processing of precursor 7, ribonuclease P/MRP subunit) or RPP2, is a 140 amino acid nuclear protein that belongs to the histone-like Alba family and functions as a component of nuclear RNase P and RNase MRP ribonucleoproteins. The gene encoding Rpp20 maps to human chromosome 7q22.1 and mouse chromosome 5 G2.

REFERENCES

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- Jarrous, N., et al. 1998. Autoantigenic properties of some protein subunits of catalytically active complexes of human ribonuclease P. *RNA* 4: 407-417.
- Jiang, T. and Altman, S. 2001. Protein-protein interactions with subunits of human nuclear RNase P. *Proc. Natl. Acad. Sci. USA* 98: 920-925.
- Hua, Y. and Zhou, J. 2004. Rpp20 interacts with SMN and is redistributed into SMN granules in response to stress. *Biochem. Biophys. Res. Commun.* 314: 268-276.
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- Hands-Taylor, K.L., et al. 2010. Heterodimerization of the human RNase P/MRP subunits Rpp20 and Rpp25 is a prerequisite for interaction with the P3 arm of RNase MRP RNA. *Nucleic Acids Res.* 38: 4052-4066.

CHROMOSOMAL LOCATION

Genetic locus: POP7 (human) mapping to 7q22.1; Pop7 (mouse) mapping to 5 G2.

SOURCE

Rpp20 (D-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 3-27 at the N-terminus of Rpp20 of human origin.

PRODUCT

Each vial contains 200 µg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-514903 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Rpp20 (D-6) is recommended for detection of Rpp20 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (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 Rpp20 siRNA (h): sc-89498, Rpp20 siRNA (m): sc-153110, Rpp20 shRNA Plasmid (h): sc-89498-SH, Rpp20 shRNA Plasmid (m): sc-153110-SH, Rpp20 shRNA (h) Lentiviral Particles: sc-89498-V and Rpp20 shRNA (m) Lentiviral Particles: sc-153110-V.

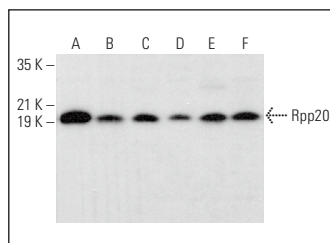
Molecular Weight of Rpp20: 16 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, NIH/3T3 whole cell lysate: sc-2210 or TK-1 whole cell lysate: sc-364798.

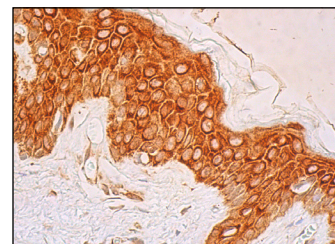
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Rpp20 (D-6): sc-514903. Western blot analysis of Rpp20 expression in HeLa (A), BT-20 (B), U-251-MG (C), TK-1 (D), NIH/3T3 (E) and C6 (F) whole cell lysates.



Rpp20 (D-6): sc-514903. Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing cytoplasmic staining of keratinocytes, fibroblasts, Langerhans cells and melanocytes. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214. Detected with m-IgGκ BP-B: sc-516142 and ImmunoCruz® ABC Kit: sc-516216.

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.