

Rpp40 (C-13): sc-169219

BACKGROUND

Ribonuclease P (RNase P) removes the 5-prime leader sequences from precursor tRNA molecules. RNase P consists of an RNA species (H1 RNA), the POP1 protein, and at least seven proteins called RPPs. The RPPs have apparent molecular masses of 14 kD (Rpp14), 20 kD (Rpp20), 25 kD (Rpp25), 29 kD (Rpp29), 30 kD (Rpp30), 38 kD (Rpp38) and 40 kD (Rpp40). Rpp40 (Ribonuclease P protein subunit p40), also known as RNASEP1, is a 363 amino acid protein that localizes to nucleolus. Existing as two alternatively spliced isoforms, the Rpp40 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken and zebrafish, and maps to human chromosome 6p25.1. Making up nearly 6% of the human genome, chromosome 6 contains around 1,200 genes within 170 million base pairs of sequence. Notably, the PARK2 gene, which is associated with Parkinson's disease, and the genes encoding the major histocompatibility complex proteins, which are key molecular components of the immune system and determine predisposition to rheumatic diseases, are all located on chromosome 6.

REFERENCES

- Jarrous, N., et al. 1998. Autoantigenic properties of some protein subunits of catalytically active complexes of human ribonuclease P. *RNA* 4: 407-417.
- Jarrous, N., et al. 1999. Localization in the nucleolus and coiled bodies of protein subunits of the ribonucleoprotein ribonuclease P. *J. Cell Biol.* 146: 559-572.
- Jarrous, N., et al. 1999. Rpp14 and Rpp29, two protein subunits of human ribonuclease P. *RNA* 5: 153-157.
- Jiang, T., et al. 2001. Protein-RNA interactions in the subunits of human nuclear RNase P. *RNA* 7: 937-941.
- Online Mendelian Inheritance in Man, OMIM[™]. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606117. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Mungall, A.J., et al. 2003. The DNA sequence and analysis of human chromosome 6. *Nature* 425: 805-811.
- Zhang, H., et al. 2004. Inhibition of the expression of the human RNase P protein subunits Rpp21, Rpp25, Rpp29 by external guide sequences (EGSs) and siRNA. *J. Mol. Biol.* 342: 1077-1083.
- 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: RPP40 (human) mapping to 6p25.1; Rpp40 (mouse) mapping to 13 A3.3.

SOURCE

Rpp40 (C-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Rpp40 of human origin.

RESEARCH USE

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

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-169219 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Rpp40 (C-13) is recommended for detection of Rpp40 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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.

Rpp40 (C-13) is also recommended for detection of Rpp40 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Rpp40 siRNA (h): sc-95630, Rpp40 siRNA (m): sc-153114, Rpp40 shRNA Plasmid (h): sc-95630-SH, Rpp40 shRNA Plasmid (m): sc-153114-SH, Rpp40 shRNA (h) Lentiviral Particles: sc-95630-V and Rpp40 shRNA (m) Lentiviral Particles: sc-153114-V.

Molecular Weight of Rpp40 isoforms: 42/39 kDa.

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) 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.

STORAGE

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

PROTOCOLS

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