

RPS4Y1/2/X (N-20): sc-85133

BACKGROUND

Ribosomes, the organelles that catalyze protein synthesis, are composed of a small subunit (40S) and a large subunit (60S) that consist of over 80 distinct ribosomal proteins. Mammalian ribosomal proteins are encoded by multigene families that contain processed pseudogenes and one functional intron-containing gene within their coding regions. RPS4Y2 (ribosomal protein S4, Y-linked 2), RPS4Y1 (ribosomal protein S4, Y-linked 1) and RPS4X (ribosomal protein S4, X-linked) are proteins that contain one S4 RNA-binding domain and exist as components of the 40S ribosomal subunit, indicating a possible role in protein synthesis.

REFERENCES

1. Wool, I.G., Chan, Y.L. and Glück, A. 1995. Structure and evolution of mammalian ribosomal proteins. *Biochem. Cell Biol.* 73: 933-947.
2. Kenmochi, N., Kawaguchi, T., Rozen, S., Davis, E., Goodman, N., Hudson, T.J., Tanaka, T. and Page, D.C. 1998. A map of 75 human ribosomal protein genes. *Genome Res.* 8: 509-523.
3. Yoshihama, M., Uechi, T., Asakawa, S., Kawasaki, K., Kato, S., Higa, S., Maeda, N., Minoshima, S., Tanaka, T., Shimizu, N. and Kenmochi, N. 2002. The human ribosomal protein genes: sequencing and comparative analysis of 73 genes. *Genome Res.* 12: 379-390.
4. Hawley, R.S. 2003. The human Y chromosome: rumors of its death have been greatly exaggerated. *Cell* 113: 825-828.
5. Ali, S. and Hasnain, S.E. 2003. Genomics of the human Y-chromosome. 1. Association with male infertility. *Gene* 321: 25-37.
6. Skaletsky, H., Kuroda-Kawaguchi, T., Minx, P.J., Cordum, H.S., Hillier, L., Brown, L.G., Repping, S., Pyntikova, T., Ali, J., Bieri, T., Chinwalla, A., Delehaunty, A., Delehaunty, K., Du, H., Fewell, G., Fulton, L., Fulton, R., et al. 2003. The male-specific region of the human Y chromosome is a mosaic of discrete sequence classes. *Nature* 423: 825-837.
7. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 400030. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: RPS4Y1 (human) mapping to Yp11.31, RPS4Y2 (human) mapping to Yq11.223, RPS4X (human) mapping to Xq13.1; Rps4x (mouse) mapping to X D.

SOURCE

RPS4Y1/2/X (N-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of RPS4Y2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85133 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

RPS4Y1/2/X (N-20) is recommended for detection of RPS4Y1 and RPS4Y2 of human origin and RPS4X of mouse, rat and human origin of mouse, rat and 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).

RPS4Y1/2/X (N-20) is also recommended for detection of RPS4Y1, RPS4Y2 and RPS4X in additional species, including equine, canine, bovine, porcine and avian.

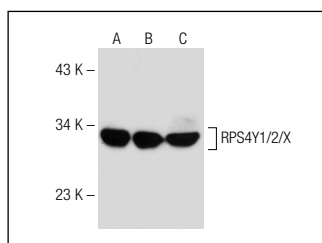
Molecular Weight of RPS4Y1/2/X: 29 kDa.

Positive Controls: RPS4X (h2): 293T Lysate: sc-173370, HeLa whole cell lysate: sc-2200 or ES-2 cell lysate: sc-24674.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



RPS4Y1/2/X (N-20): sc-85133. Western blot analysis of RPS4Y1/2/X expression in PC-3 (A), HL-60 (B) and HeLa (C) 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.