

# Ribosomal Protein S16 (P-14): sc-132068

## 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. Ribosomal Protein S16, also known as RPS16, is a 146 amino acid cytoplasmic protein that belongs to the S9P ribosomal protein family. One of several components of the 40S subunit, Ribosomal Protein S16 may play a role in ribosome assembly and translation initiation. Elevated levels of Ribosomal Protein S16 may be associated with pancreatic and breast cancer, suggesting a possible role for Ribosomal Protein S16 in tumorigenesis. Like other mammalian ribosomal proteins, Ribosomal Protein S16 exists as multiple processed pseudogenes that are found throughout the genome.

## REFERENCES

1. Batra, S.K., Metzgar, R.S. and Hollingsworth, M.A. 1991. Molecular cloning and sequence analysis of the human Ribosomal Protein S16. *J. Biol. Chem.* 266: 6830-6833.
2. Wool, I.G., Chan, Y.L. and Glück, A. 1995. Structure and evolution of mammalian ribosomal proteins. *Biochem. Cell Biol.* 73: 933-947.
3. Vladimirov, S.N., Ivanov, A.V., Karpova, G.G., Musolyamov, A.K., Egorov, T.A., Thiede, B., Wittmann-Liebold, B. and Otto, A. 1996. Characterization of the human small-ribosomal-subunit proteins by N-terminal and internal sequencing, and mass spectrometry. *Eur. J. Biochem.* 239: 144-149.
4. 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.
5. 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.
6. Kapp, L.D. and Lorsch, J.R. 2004. The molecular mechanics of eukaryotic translation. *Annu. Rev. Biochem.* 73: 657-704.
7. Andersen, J.S., Lam, Y.W., Leung, A.K., Ong, S.E., Lyon, C.E., Lamond, A.I. and Mann, M. 2005. Nucleolar proteome dynamics. *Nature* 433: 77-83.
8. Yu, Y., Ji, H., Doudna, J.A. and Leary, J.A. 2005. Mass spectrometric analysis of the human 40S ribosomal subunit: native and HCV IRES-bound complexes. *Protein Sci.* 14: 1438-1446.
9. Ian'shina, D.D., Malygin, A.A. and Karpova, G.G. 2007. Binding of human ribosomal protein S16 with the 18S rRNA fragment 1203-1236/1521-1698. *Mol. Biol.* 41: 1023-1030.

## CHROMOSOMAL LOCATION

Genetic locus: RPS16 (human) mapping to 19q13.2; Rps16 (mouse) mapping to 7 A3.

## STORAGE

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

## SOURCE

Ribosomal Protein S16 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Ribosomal Protein S16 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-132068 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Ribosomal Protein S16 (P-14) is recommended for detection of Ribosomal Protein S16 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).

Ribosomal Protein S16 (P-14) is also recommended for detection of Ribosomal Protein S16 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Ribosomal Protein S16 siRNA (h): sc-97200, Ribosomal Protein S16 siRNA (m): sc-152937, Ribosomal Protein S16 shRNA Plasmid (h): sc-97200-SH, Ribosomal Protein S16 shRNA Plasmid (m): sc-152937-SH, Ribosomal Protein S16 shRNA (h) Lentiviral Particles: sc-97200-V and Ribosomal Protein S16 shRNA (m) Lentiviral Particles: sc-152937-V.

Molecular Weight of Ribosomal Protein S16: 16 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

## 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.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.