SANTA CRUZ BIOTECHNOLOGY, INC.

Ribosomal Protein S18 (G-13): sc-161199

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The Power to Question

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. Ribosomal Protein S18, also designated 40S ribosomal protein S18, RPS18, D6S218E, KE3 or HKE3, is a 152 amino acid cytoplasmic protein belonging to the ribosomal protein S13P family. A component of the 40S subunit, Ribosomal Protein S18 is a known binding partner of Cofilin and has been suggested to be a novel substrate for CaMKII. The gene encoding Ribosomal Protein S18 maps to human chromosome 6p21.32, and like most ribosomal proteins, Ribosomal Protein S18 exists as multiple processed pseudogenes that are scattered throughout the genome.

REFERENCES

1. Chan, Y.L., Paz, V. and Wool, I.G. 1991. The primary structure of rat ribosomal protein S18. Biochem. Biophys. Res. Commun. 178: 1212-1218.
2. Chassin, D., Bellet, D. and Koman, A. 1993. The human homolog of ribosomal protein S18. Nucleic Acids Res. 21: 745.
3. Wool, I.G., Chan, Y.L. and Glück, A. 1995. Structure and evolution of mammalian ribosomal proteins. Biochem. Cell Biol. 73: 933-947.
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. Online Mendelian Inheritance in Man, OMIM™. 1999. Johns Hopkins University, Baltimore, MD. MIM Number: 180473. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Mishra-Gorur, K., Singer, H.A. and Castellot, J.J. 2002. The S18 ribosomal protein is a putative substrate for Ca^{2+}/calmodulin-activated protein kinase II. J. Biol. Chem. 277: 33537-33540.
7. Kusui, K., Sasaki, H., Adachi, R., Matsui, S., Yamamoto, K., Yamaguchi, T., Kasahara, T. and Suzuki, K. 2004. Ribosomal protein S18 identified as a cofilin-binding protein by using phage display library. Mol. Cell. Biochem. 262: 187-193.

CHROMOSOMAL LOCATION

Genetic locus: RPS18 (human) mapping to 6p21.32; Rps18 (mouse) mapping to 17 B1.

SOURCE

Ribosomal Protein S18 (G-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of Ribosomal Protein S18 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-161199 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Ribosomal Protein S18 (G-13) is recommended for detection of Ribosomal Protein S18 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 Ribosomal Protein S family members.

Ribosomal Protein S18 (G-13) is also recommended for detection of Ribosomal Protein S18 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Ribosomal Protein S18 siRNA (h): sc-95346, Ribosomal Protein S18 siRNA (m): sc-152939, Ribosomal Protein S18 shRNA Plasmid (h): sc-95346-SH, Ribosomal Protein S18 shRNA Plasmid (m): sc-152939-SH, Ribosomal Protein S18 shRNA (h) Lentiviral Particles: sc-95346-V and Ribosomal Protein S18 shRNA (m) Lentiviral Particles: sc-152939-V.

Molecular Weight of Ribosomal Protein S18: 18 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.

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.