

p-Ribosomal Protein S6 (B-6): sc-514033

BACKGROUND

The genes encoding for mammalian ribosomal proteins comprise multigene families that consist predominantly of multiple processed pseudogenes and one functional intron-containing gene within their coding regions. The RPS6 gene gives rise to Ribosomal Protein S6 (also designated RPS6). RPS6 is the major substrate of protein kinases in eukaryotic ribosomes. Sequence comparison has identified RPS6 as the equivalent of the Ribosomal Protein S10 from *Saccharomyces cerevisiae*. The sequence comparison of ribosomal proteins from evolutionarily distant eukaryotes, such as yeast and human, indicates that the structure and probably the function of RPS6 has been highly conserved. RPS6 phosphorylation is stimulated by growth factors, tumor promoting agents and mitogens. It is dephosphorylated at growth arrest.

REFERENCES

- Gross, T., et al. 1988. Primary structure of the ribosomal protein gene S6 from *Schizosaccharomyces pombe*. *Curr. Genet.* 13: 57-63.
- Lott, J.B. and Mackie, G.A. 1988. Isolation and characterization of cloned cDNAs that code for human ribosomal protein S6. *Gene* 65: 31-39.
- Heinze, H., et al. 1988. The primary structure of the human ribosomal protein S6 derived from a cloned cDNA. *J. Biol. Chem.* 263: 4139-4144.
- Feo, S., et al. 1992. The mapping of seven intron-containing ribosomal protein genes shows they are unlinked in the human genome. *Genomics* 13: 201-207.
- Bandi, H.R., et al. 1993. Identification of 40 S ribosomal protein S6 phosphorylation sites in Swiss mouse 3T3 fibroblasts stimulated with serum. *J. Biol. Chem.* 268: 4530-4533.
- Hernandez, V.P. and Fallon, A.M. 1999. Ribosomal protein S6 cDNA from two *Aedes* mosquitoes encodes a carboxyl-terminal extension that resembles histone H1 proteins. *Genetica* 106: 263-267.

CHROMOSOMAL LOCATION

Genetic locus: RPS6 (human) mapping to 9p22.1; Rps6 (mouse) mapping to 4 C4.

SOURCE

p-Ribosomal Protein S6 (B-6) is a mouse monoclonal antibody specific for an epitope mapping to a short amino acid sequence containing Ser 236 phosphorylated Ribosomal Protein S6 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-514033 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

p-Ribosomal Protein S6 (B-6) is recommended for detection of Ser 236 phosphorylated 40S Ribosomal Protein S6 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Ribosomal Protein S6 siRNA (h): sc-36424, Ribosomal Protein S6 siRNA (m): sc-36425, Ribosomal Protein S6 shRNA Plasmid (h): sc-36424-SH, Ribosomal Protein S6 shRNA Plasmid (m): sc-36425-SH, Ribosomal Protein S6 shRNA (h) Lentiviral Particles: sc-36424-V and Ribosomal Protein S6 shRNA (m) Lentiviral Particles: sc-36425-V.

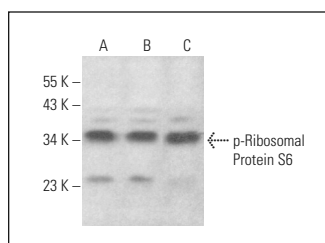
Molecular Weight of p-Ribosomal Protein S6: 28 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Hep G2 cell lysate: sc-2227 or CCRF-CEM cell lysate: sc-2225.

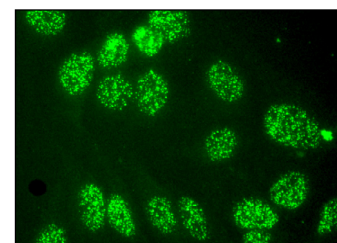
RECOMMENDED SUPPORT REAGENTS

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, TBS Blotto B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Lambda Phosphatase: sc-200312A 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.

DATA



p-Ribosomal Protein S6 (B-6): sc-514033. Western blot analysis of Ribosomal Protein S6 phosphorylation in Hep G2 (A), K-562 (B) and CCRF-CEM (C) whole cell lysates.



p-Ribosomal Protein S6 (B-6): sc-514033. Immunofluorescence staining of formalin-fixed Hep G2 cells showing nuclear localization.

SELECT PRODUCT CITATIONS

- Mao, Z., et al. 2022. mTORC1 activation induced proximal tubular damage via the pentose phosphate pathway in lupus nephritis. *Free Radic. Biol. Med.* 189: 91-101.

RESEARCH USE

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