SANTA CRUZ BIOTECHNOLOGY, INC.

p-Ribosomal Protein S6 (Ser 236): sc-54279

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The Power to Question

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

1. Gross, T., et al. 1988. Primary structure of the ribosomal protein gene S6 from *Schizosaccharomyces pombe*. Curr. Genet. 13: 57-63.
2. 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.

CHROMOSOMAL LOCATION

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

SOURCE

p-Ribosomal Protein S6 (Ser 236) is a rabbit polyclonal antibody raised against a short amino acid sequence containing Ser 236 phosphorylated Ribosomal Protein S6 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-54279 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

p-Ribosomal Protein S6 (Ser 236) is recommended for detection of Ser 236 phosphorylated 40S Ribosomal Protein S6 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).

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.

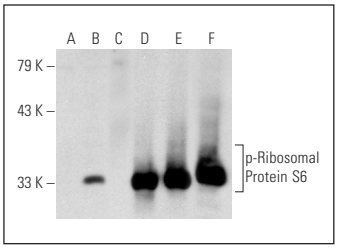
Molecular Weight of p-Ribosomal Protein S6: 28 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

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 B Blocking Reagent: sc-2335 (use 50 mM NaF, sc-24988, as diluent), Western Blotting Luminol Reagent: sc-2048 and Lambda Phosphatase: sc-200312A. 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



Western blot analysis of Ribosomal Protein S6 phosphorylation in untreated (**A**,**D**), serum starved, EGF treated and serum treated (**B**,**E**) and serum starved, EGF treated, serum treated and lambda protein phosphatase (sc-200312A) treated (**C**,**F**) HEK293 whole cell lysates. Antibodies tested include p-Ribosomal Protein S6 (Ser 236): sc-54279 (**A**,**B**,**C**) and Ribosomal Protein S6 (C-8): sc-74459 (**D**,**E**,**F**).

SELECT PRODUCT CITATIONS

1. Chen, L., et al. 2011. Cadmium induction of reactive oxygen species activates the mTOR pathway, leading to neuronal cell death. Free Radic. Biol. Med. 50: 624-632.
2. Zhou, X., et al. 2014. Rapamycin and everolimus facilitate hepatitis E virus replication: revealing a basal defense mechanism of PI3K-PKB-mTOR pathway. J. Hepatol. 61: 746-754.

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.