SANTA CRUZ BIOTECHNOLOGY, INC.

p-Ribosomal Protein S6 (24.Ser 240): sc-293143

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., et al. 1988. Isolation and characterization of cloned cDNAs that code for human Ribosomal Protein S6. Gene 65: 31-39.
3. 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.
4. 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.
5. 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.
6. Hernandez, V.P., et al. 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 (24.Ser 240) is a mouse monoclonal antibody raised against a short amino acid sequence containing Ser 240 phosphorylated Ribosomal Protein S6 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

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. Not for resale.

APPLICATIONS

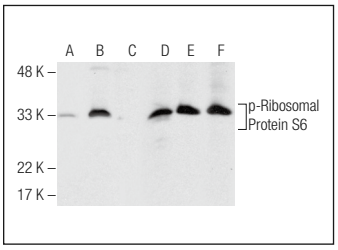
p-Ribosomal Protein S6 (24.Ser 240) is recommended for detection of Ser 240 phosphorylated Ribosomal Protein S6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] 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.

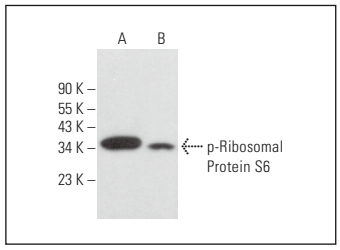
Molecular Weight of p-Ribosomal Protein S6: 28 kDa.

Positive Controls: MDA-MB-435S whole cell lysate: sc-364184 or NIH/3T3 whole cell lysate: sc-2210.

DATA



Western blot analysis of Ribosomal Protein S6 phosphorylation in untreated (**A**,**D**), EGF treated (**B**,**E**) and EGF and lambda protein phosphatase (sc-200312A) treated (**C**,**F**) HEK293 whole cell lysates. Antibodies tested include p-Ribosomal Protein S6 (24.Ser 240): sc-293143 (**A**,**B**,**C**) and Ribosomal Protein S6 (C-8): sc-74459 (**D**,**E**,**F**).



p-Ribosomal Protein S6 (24.Ser 240): sc-293143. Western blot analysis of Ribosomal Protein S6 phosphorylation in MDA-MB-435S (**A**) and NIH/3T3 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Wang, J., et al. 2017. Isopsoralen-mediated suppression of bone marrow adiposity and attenuation of the adipogenic commitment of bone marrow-derived mesenchymal stem cells. Int. J. Mol. Med. 39: 527-538.
2. Danielpour, D., et al. 2019. JAB1/COPS5 is a putative oncogene that controls critical oncoproteins deregulated in prostate cancer. Biochem. Biophys. Res. Commun. 518: 374-380.
3. Danielpour, D., et al. 2019. Early cellular responses of prostate carcinoma cells to sepantronium bromide (YM155) involve suppression of mTORC1 by AMPK. Sci. Rep. 9: 11541.
4. Danielpour, D., et al. 2022. Hypoxia represses early responses of prostate and renal cancer cells to YM155 independent of HIF-1α and HIF-2α. Curr. Res. Pharmacol. Drug Discov. 3: 100076.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.