

# Ribosomal Protein S6 (C-8): sc-74459

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Ribosomal Protein S6 (C-8) is a mouse monoclonal antibody raised against amino acids 1-249 of Ribosomal Protein S6 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ribosomal Protein S6 (C-8) is available conjugated to agarose (sc-74459 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74459 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74459 PE), fluorescein (sc-74459 FITC), Alexa Fluor® 488 (sc-74459 AF488), Alexa Fluor® 546 (sc-74459 AF546), Alexa Fluor® 594 (sc-74459 AF594) or Alexa Fluor® 647 (sc-74459 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-74459 AF680) or Alexa Fluor® 790 (sc-74459 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

Ribosomal Protein S6 (C-8) is recommended for detection of 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), immunohistochemistry (including paraffin-embedded sections) (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.

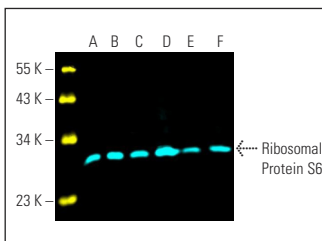
Molecular Weight of Ribosomal Protein S6: 32 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, K-562 whole cell lysate: sc-2203 or PC-12 cell lysate: sc-2250.

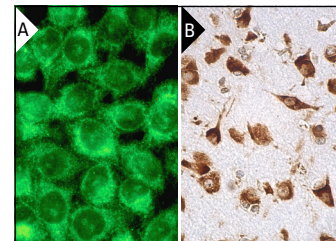
## STORAGE

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

## DATA



Ribosomal Protein S6 (C-8) Alexa Fluor® 647: sc-74459 AF647. Direct fluorescent western blot analysis of Ribosomal Protein S6 expression in K-562 (A), HEL 92.1.7 (B), MCF7 (C), 3T3-L1 (D), PC-12 (E) and C6 (F) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 488: sc-516790.



Ribosomal Protein S6 (C-8): sc-74459. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic staining of neuronal and glial cells (B).

## SELECT PRODUCT CITATIONS

- Calounova G., et al. 2010. The Src homology 2 domain-containing adapter protein B (SHB) regulates mouse oocyte maturation. *PLoS ONE* 5: e11155.
- Takayama, K., et al. 2018. Leucine/glutamine and v-ATPase/lysosomal acidification via mTORC1 activation are required for position-dependent regeneration. *Sci. Rep.* 8: 8278.
- William, M., et al. 2019. Translational repression of Ccl5 and Cxcl10 by 4E-BP1 and 4E-BP2 restrains the ability of mouse macrophages to induce migration of activated T cells. *Eur. J. Immunol.* 49: 1200-1212.
- Das, V., et al. 2020. Early treatment with metformin in a mice model of complex regional pain syndrome reduces pain and edema. *Anesth. Analg.* 130: 525-534.
- Ladelfa, M.F., et al. 2021. Expression of the tumor-expressed protein MageB2 enhances rRNA transcription. *Biochim. Biophys. Acta Mol. Cell Res.* 1868: 119015.
- Gandin, V., et al. 2022. Cap-dependent translation initiation monitored in living cells. *Nat. Commun.* 13: 6558.
- Horwath, O., et al. 2023. Acute hypoxia attenuates resistance exercise-induced ribosome signaling but does not impact satellite cell pool expansion in human skeletal muscle. *FASEB J.* 37: e22811.
- Nie, S., et al. 2024.  $\beta$ -carboline derivative Z86 attenuates colorectal cancer cell proliferation and migration by directly targeting PI3K. *Nat. Prod. Bioprospect.* 14: 3.

## RESEARCH USE

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