

Ribosomal Protein S5 (A-8): sc-390935

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 S5, also known as RPS5, is a 204 amino acid component of the 40S complex. Localized to the cytoplasm, Ribosomal Protein S5 belongs to the S7P family of ribosomal proteins and functions in protein synthesis. Like most ribosomal proteins, Ribosomal Protein S5 exists as multiple processed pseudogenes that are scattered throughout the genome. Ribosomal Protein S5 is expressed at variable amounts in colorectal cancer cells, suggesting a possible role in carcinogenesis.

REFERENCES

- Hori, N., et al. 1993. A cDNA sequence of human ribosomal protein, homologue of yeast S28. *Nucleic Acids Res.* 21: 4394.
- Kenmochi, N., et al. 1998. A map of 75 human ribosomal protein genes. *Genome Res.* 8: 509-523.

CHROMOSOMAL LOCATION

Genetic locus: RPS5 (human) mapping to 19q13.43; Rps5 (mouse) mapping to 7 A1.

SOURCE

Ribosomal Protein S5 (A-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 171-204 at the C-terminus of Ribosomal Protein S5 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Ribosomal Protein S5 (A-8) is available conjugated to agarose (sc-390935 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390935 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390935 PE), fluorescein (sc-390935 FITC), Alexa Fluor[®] 488 (sc-390935 AF488), Alexa Fluor[®] 546 (sc-390935 AF546), Alexa Fluor[®] 594 (sc-390935 AF594) or Alexa Fluor[®] 647 (sc-390935 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-390935 AF680) or Alexa Fluor[®] 790 (sc-390935 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390935 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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STORAGE

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

APPLICATIONS

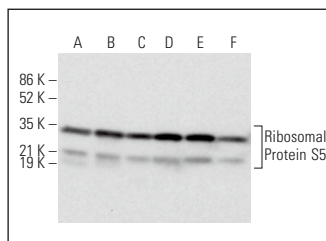
Ribosomal Protein S5 (A-8) is recommended for detection of Ribosomal Protein S5 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 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 S5 siRNA (h): sc-97457, Ribosomal Protein S5 siRNA (m): sc-152951, Ribosomal Protein S5 shRNA Plasmid (h): sc-97457-SH, Ribosomal Protein S5 shRNA Plasmid (m): sc-152951-SH, Ribosomal Protein S5 shRNA (h) Lentiviral Particles: sc-97457-V and Ribosomal Protein S5 shRNA (m) Lentiviral Particles: sc-152951-V.

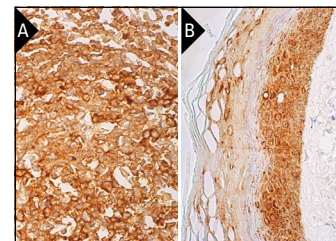
Molecular Weight of Ribosomal Protein S5: 23 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, WEHI-231 whole cell lysate: sc-2213 or Ramos cell lysate: sc-2216.

DATA



Ribosomal Protein S5 (A-8): sc-390935. Western blot analysis of Ribosomal Protein S5 expression in OVCA9-3 (A), Ramos (B), HOS (C), WEHI-231 (D) and RAW 264.7 (E) whole cell lysates and rat tongue tissue extract (F).



Ribosomal Protein S5 (A-8): sc-390935. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lymph node tissue showing cytoplasmic and nuclear staining of cells in germinal center and cells in non-germinal center (A), and of human skin tissue showing cytoplasmic staining of keratinocytes, Langerhans cells and melanocytes (B). Blocked with 0.25X UltraCruz[®] Blocking Reagent: sc-516214. Detection reagents used: m-IgGκ: BP-B: sc-516142 and ImmunoCruz[®] ABC Kit: sc-516216.

SELECT PRODUCT CITATIONS

- Clasen, S.J., et al. 2017. Prolyl dihydroxylation of unassembled uS12/RPS23 regulates fungal hypoxic adaptation. *Elife* 6: e28563.
- Challa, S., et al. 2021. Ribosome ADP-ribosylation inhibits translation and maintains proteostasis in cancers. *Cell* 184: 4531-4546.e26.
- Harnett, D., et al. 2022. A critical period of translational control during brain development at codon resolution. *Nat. Struct. Mol. Biol.* 29: 1277-1290.
- Lessenger, A.T., et al. 2024. Somatic polyploidy supports biosynthesis and tissue function by increasing transcriptional output. *bioRxiv*. E-published.

RESEARCH USE

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