SANTA CRUZ BIOTECHNOLOGY, INC.

Ribosomal Protein S2 (80-H): sc-130399

BACKGROUND

Ribosomal subunits are synthesized in the nucleus, and mature 40S and 60S subunits are exported stoichiometrically into the cytoplasm. Both 40S and 60S subunits are composed of four RNA species and approximately 80 structurally distinct proteins. Mitochondrial ribosomes consist of a small 28S subunit and a large 39S subunit. Ribosomal proteins have the ability to pass through the nuclear envelope in the native state, making them the largest of the structures accommodated by the nuclear pore complexes. The nuclear export of ribosomal subunits is a unidirectional, saturable and energy-dependent process. Ribosomal Protein S2 is part of the 40S subunit that mediates aminoacyl-transfer RNA binding to the ribosome, thereby affecting the fidelity of mRNA translation. Ribosomal Protein S2 is methylated by protein arginine methyltransferase 3 (PRMT3), which may inhibit ubiquitin-mediated proteolysis of Ribosomal Protein S2. Ribosomal Protein S2 expression has been shown to be elevated in human premalignant leukoplakia, head and neck squamous cell carcinomas and colon and breast cancers, making it a potentially useful diagnostic marker for some human tumors.

CHROMOSOMAL LOCATION

Genetic locus: RPS2 (human) mapping to 16p13.3; Rps2 (mouse) mapping to 17 A3.3.

SOURCE

Ribosomal Protein S2 (80-H) is a mouse monoclonal antibody raised against recombinant Ribosomal Protein S2 of human origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} 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.

APPLICATIONS

Ribosomal Protein S2 (80-H) is recommended for detection of Ribosomal Protein S2 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), 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 S2 siRNA (h): sc-93184, Ribosomal Protein S2 shRNA Plasmid (h): sc-93184-SH and Ribosomal Protein S2 shRNA (h) Lentiviral Particles: sc-93184-V.

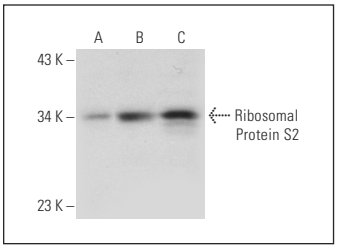
Molecular Weight of Ribosomal Protein S2: 30 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, HeLa whole cell lysate: sc-2200 or Ribosomal Protein S2 (h7): 293 Lysate: sc-114060.

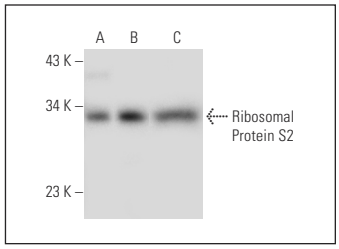
RECOMMENDED SUPPORT REAGENTS

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, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

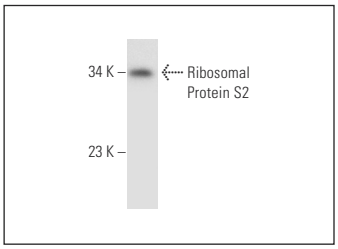
DATA



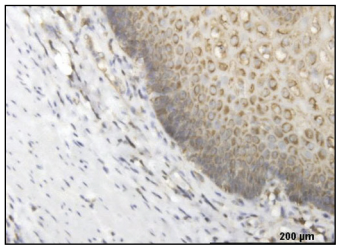
Ribosomal Protein S2 (80-H): sc-130399. Western blot analysis of Ribosomal Protein S2 expression in non-transfected 293: sc-110760 (**A**), human Ribosomal Protein S2 transfected 293: sc-114060 (**B**) and K-562 (**C**) whole cell lysates.



Ribosomal Protein S2 (80-H): sc-130399. Western blot analysis of Ribosomal Protein S2 expression in non-transfected 293: sc-110760 (**A**), human Ribosomal Protein S2 transfected 293: sc-111892 (**B**) and HeLa (**C**) whole cell lysates.



Ribosomal Protein S2 (80-H): sc-130399. Western blot analysis of Ribosomal Protein S2 expression in Jurkat whole cell lysate.



Ribosomal Protein S2 (80-H): sc-130399. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human esophagus tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Johnson, A.G., et al. 2019. RACK1 on and off the ribosome. RNA 25: 881-895.

RESEARCH USE

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

PROTOCOLS

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